AMERICAN FARMER.

VOL. XIII. BALTIMORE, JANUARY, 1858. No. 7.

WORK FOR THE MONTH.

JANUARY.

At the commencement of the new year, permit us in all sincerity to tender you with the compliments of the season, and to express the hope, from the deepest well-springs of our hearts, that your days may be blessed with health, happiness, and prosperity, that your fields may prove fruitful, crops abundant, and remunerating prices reward your labors; for if there be one class of society that more than any other deserves to be thus compensated, it is the tillers of the earth.

With this tender of our compliments, our hopes, and our aspirations, permit us to remind you that it behooves all engaged in our noble calling, to come to the firm determination, to so carry on our operations throughout the year, as not to lose any time that ought to be devoted to the occupations of our farms, in order that our exertions may tell in their results, not only in abundant crops, but in the improvement of our lands. Hence, then, it is befitting us all, before we commence the committing our seeds to the soil, to be sure that the ground has been thoroughly and well prepared; for, of a truth, thorough preparation and generous manuring, are the two foundation stones of successful farming; superadded to which, we must all see that no crop requiring cleansing shall be neglected in working, and that it be worked at the proper time.

In marking out your year's cropping, look well to the force and the means that you have to work with. Don't overcrop yourself; for so sure as you do so, the result will be, that much will be left half done, or perhaps altogether neglected, in the cultivation. Strain every nerve, use every available means within your power, to manure every acre that you may cultivate, that requires nourishment.—Upon this point, make up your minds to these truths: Every plant cultivated by husbandmen requires to be fed; that an acre well manured, well ploughed, and properly cultivated, will produce more than two acres whose wants have not been thus attended to, and that your true interest consists in confining your culture to that which you can do justice by, as well in manuring, preparation of the ground, as in tending the growing crops. You may rely upon it, that no more corn, or other row-crops, should be put in, than can be generously manured and cleanly cultivated; *nutriment* and *cleanliness* being the essential elements of product.

With the expression of these opinions, we turn to the duty of pointing out, briefly, a few of the many things that should claim attention on the farm during the month.

Winter Ploughing.

There are many periods during winter, when, from the mildness of the weather, ploughing may be done. Therefore, if you have any stiff, clayey land, that you desire to put in crops next spring, you should seize all such favorable seasons to get it broke up. By exposure to frosts, when broken up, such lands, *if ploughed in the right state*, become greatly improved, and lose much of their tenacity of character, are more easily cultivated, less expensive to till, besides being rendered better adapted to the production of crops. But this amelioration in texture can only be expected, when the soil, at the time of its being ploughed *is neither too wet* nor too dry. All, especially strong loams and clays, should be ploughed in the *medium state*, between wet and dry, or when they are comparatively *mellow, slightly moist, and least cohesive*. When clayey soils are perfectly dry, they are so hard and rebellious, as to be unconquerable by the plough; and when decidedly wet, they are so sticky and plastic, as to be workable by ploughing only into masses of plaster, with innumerable receptacles for water, utterly incapable of subsequent pulverization, and certain to settle into hard clods, on which no farm crop can grow. The furrows should be made to lap at an angle of about 45°, so as to expose the greatest surface to the action of the frost. Thus, if you plough 6 inches deep, the furrow should be 9 inches wide; if the depth of the furrow be 8 inches, then the furrow should be 12 inches wide. In the spring, when the ground is dry enough to bear the team, without danger of being injured by poaching, it should be rolled, and then harrowed with a heavy two or three-horse harrow, until the soil be as thoroughly pulverized, as from its nature it is susceptible. We go in for thorough tilth; for as perfect sub-division of the particles of soil as possible, and for deep ploughing, having no fears about a few inches of "poison-till."

Surface Drains.

Careful hands should be made to go through the fields in winter-grain, examine the surface-drains carefully, and remove all obstructions to the passage of the water. This duty should be repeated every few weeks during winter and early spring, so as to prevent any accumulations of water upon the young plants, as the settling of water upon them during frost, exerts the most injurious influence upon

them, being frequently one of the causes of what is termed winter-killing; ground *surcharged with water*, in times of frost, being more liable to be operated upon by the contracting and expansive powers of cold and heat, than when such is not the case.

In connection with injuries resulting from freezing out, we will remark, that stiff lands, if properly drained, ploughed deeply, thoroughly pulverized, water-drained, and the drains, at short intervals, attended to, would not *winter-kill* one-tenth part of the winter grain that they now do. A deep dry bed, is the most sovereign cure for such disease, if it can be so called, that can be prescribed.

WORKING ANIMALS.

These, of every kind, should be treated with care and attention. Warm, well ventilated stables, good fare regularly dispensed to them thrice a day, well littered stables, currying and rubbing down morning and night, and water three times a day, are great promoters of health; and at no season of the year is such treatment and care more needed than this, when the poor creatures have to perform their labors amidst every degree of inclement weather.

Two ounces of salt ought to be given them thrice a week, or the same quantity of a mixture of equal portions of salt, ashes and *slaked* lime; oyster shell lime the best kind for the purpose.

FENCING.

If you have not already felled and got out stuff for posts and rails, have this work promptly done, and have the materials hauled to the barn, to be worked up into fencing, by the hands, in bad weather.

FIRE WOOD.

If you have not already completed your supply of fire wood, have it done promptly, before the roads become almost impassable. When hauled in, have it piled up ready for use.

GATES.

We repeat our former advice. Have every pair of bars on your place replaced by a light, substantial gate.

MILCH COWS.

These should have warm stables, or tight, dry sheds, and receive generous feeding and kind treatment. Water them thrice a day, and salt them thrice a week.

IN-CALF COWS, AND HEIFERS.

Feed these moderately well, give them dry, warm shedding, water them thrice a day, and salt them thrice a week.

BREEDING MARES.

These should be fed moderately liberal, and receive such food as is good and nourishing. They should be so fed as to keep their stomachs at peace, and to preserve their muscular integrity. Pregnant animals should not be kept fat, still they should be fed upon such nutritious food, and in such quantities, as will keep them in good condition. The feeder should recollect that the young ones within require support as well as their mothers; the foals have bones to be formed, flesh to be elaborated, and fat to secrete, and that these cannot be formed unless their dams receive the materials out of which they can be made. Good dry sheds and yards, are also necessary to the comfort and health of these animals.

MATERIALS FOR MAKING MANURE.

Collect everything on your place that may be convertible into manure, haul it to your barn-yard and spread it thereon, or form it into compost heaps.

CARTS, WAGONS, TOOLS, IMPLEMENTS.

Examine these, and have such of them as need it, repaired, and if not needed for use, have them put under cover.

DITCHING AND DRAINING.

Wet lands should be laid dry, by ditches and drains.

SLEIGHS.

Get these ready for the accommodation of the ladies of your families. If needed, have them repaired, and give them a coat of paint.

YOUNG COLTS AND CATTLE.

Give to each of this species of stock, separate yards, with warm sheds, and feed them so as to keep them in good growing condition. To *stint* young stock of their food, is to *stunt* them of their growth. Good hay and moderate feeds of grain, are indispensable to the growth of young stock of all kinds.

SHEEP.

Attend to these as we have so often advised.

GRAIN FOR FEEDING,

Should always be chopped or ground. By such preparation, fully one-fourth the grain may be economised, while it will be more healthful for the animals.

SELLING CORN.

Sell your corn *shelled*, and have the cobs crushed or ground for your stock.

CORN AND COB CRUSHER.

If you have not one, get one at once. It will save its price in *one* season, and last *many*, if well used.

CORN SHELLERS.

Every farmer should have a good corn sheller, either to go by hand, or horse power.

BREEDING SOWS.

Provide these with warm, dry sleeping apartments, give them good bedding, and renew it often. Each breeding sow should have a separate apartment to herself, and be moderately well fed.

STORE PIGS.

Let their food be sufficiently generous, to keep them always in a growing condition: a hog, to be profitable, should never be so fed as to be arrested in his growth, by a system of half starvation.

GEARING.

Clean and grease your gearing once a month.

MARL.

If you have marl, and fields that need it, apply it this winter.

POULTRY.

Feed these moderately well; alternate their food, supply them with gravel, old mortar and sand, or ashes, to roll in. If you wish to encourage their laying in winter, give them fresh meat, chopped up, thrice a week.

WORK IN THE GARDEN.

JANUARY.

There is not much work in the garden this month; but however little there may be, it should be attended to, and it shall now be our duty to point that little out.

Clayey Beds.—If there be any stiff, clayey beds in your garden, you should seize the occasion of any warm spells of weather through the winter, when the ground may not be frozen, nor too wet or too dry, to have them dug up. First give the beds a good dressing of strong manure, spade it up a full

spade in depth; when dug, leave the beds in the rough, and give them a top-dressing of ashes.

Hot Beds.—If your garden is not provided with hot beds, in which to grow plants for early transplantation, it is time to get them ready, as such appliances are indispensable to the successful growth of early vegetables, to grow which, should be an object with every provident owner of a farm.

If the procurement of frames with glass lights, should be considered objectionable, upon the score of expense, the glass can be very advantageously substituted by cotton cloth, which, when oiled, will be found to be a very excellent conductor of light and heat.

For most families, a hot bed frame of 10 or 12 feet long, the width of the border, (which should face the South,) will be found of sufficient dimensions to grow all the early plants needed, and such a frame can be made by any person that can nail planks together; but should glass lights be needed, the expense will not be heavy. The back of the frame should be *twice the height of the front*; the front about 5 feet high. A few inches space should be left behind the back, for insertion of horse dung, to raise the heat. A top or cover must be made, to stretch the cotton cloth cover over, to be attached by hinges, for the convenience of being raised up and lowered down, to give air to the plants and regulate the heat. The cotton, when tacked on, must be oiled. The best boards to make the frame out of, is yellow pine, about 1½ inch in thickness.

Mode of making the Hot Bed.—A hot bed can either be formed on the surface, or by sinking the frame a few inches; the former we think the most eligible plan.

The dung should be horse dung, which should be turned over, shaken, and well mixed with a dung fork, as it is being put in on the bed; every now and again, beat it down with the back of your fork: continue this process until the dung is about 4 feet in depth in the frame, when the dung must be left to settle down 6 or 7 inches, which it will do in 8 or 10 days. When the dung is in, put down the cover to raise the heat. When the heat is sufficiently raised, put 4 or 5 inches of dry earth or mould on top of the dung, level and rake it, and your hot bed will be ready for sowing the seeds of any kind of vegetables you may desire to grow.

The space behind the frame must be filled with horse dung.

Time of Sowing the Seed.—Most plants after the seeds are sown, are ready to set out in from 6 to 8 weeks. Keeping this fact in mind, those who have hot beds, can very readily regulate the time of sowing their different kinds of seeds; marking the time when, in their *respective localities*, plants may be safely set out in the open ground, govern as to the time of sowing the seeds. As an *average* of time, it would be safest to allow 6 weeks for the growth of the plants.

Management of the Bed.—On every good day in mild weather, after the plants are up, the sash should be raised, a few hours in mid-day, a few inches high, to admit air and graduate heat. In bad, cold weather, the bed should be covered with matting.

Corn Spoiling.—Many of our farmers have ascertained that much of the corn they stowed away this fall has spoilt in the bulk. This is doubtless solely due to the fact that the corn crop was much later making than usual, and was not sufficiently dry when housed.—*Charlottesville (Va.) Advocate*

COLOMBIAN GUANO.

To the Editors of the American Farmer:

In the December No. of your journal, Dr. Piggot has done me the honor to review my little article on the "Rock Guano of the Caribbean Sea Islands," which appeared in the number for November; some portions of which he has evidently glanced over very hastily, as he has misunderstood my meaning. Having the highest opinion of Dr. Piggot's analytical skill, and knowing the experience which he has had in the examination of guanoes, I differed from him principally in regard to a chemico-geological question. But, unfortunately, he seems to have appropriated some of my remarks, which were generally made, to have a special application to himself; for instance, he writes: "Mr. Taylor enters also into a defence of the use of the new phosphates in agriculture, and says he does not see why they should be condemned. *I never condemned them.*" I would not make such a charge against Dr. Piggot's scientific acquirements, as to suppose him capable of condemning, untried, substances which it is reasonable to suppose, will soon be clearly demonstrated, (by practice) to be valuable in agriculture.

Dr. Piggot does not seem to have noticed the progressive substitution in the phosphates, as shown by the specimens from Centinella. The ash from the recent bird excrement, is in composition very near that of the Guano rock from Los Monges Islands; the excrement converted into rock beneath the cliffs, varies a little, there being a slight substitution of the phosphates of lime, by alumina; in the main rock of the islands, the substitution has progressed farther.

Any positive theory as to the formation of the Rock Guano, cannot be made until the Islands have been fully explored, the phenomena carefully noted, and the sea water of that locality analyzed. The sea water in the vicinity of some volcanoes has been found to contain sulphate of alumina; very possibly that of the Caribbean Sea also contains it. Sea water has also determinable quantities of proto-carbonate of iron in solution, (according to Bischof,) and the consequent action of these substances upon the phosphates of lime of the bird excrement, may produce wavellite and vivianite, which being hydrated minerals, are evidently formed by water.

The phosphate of iron, which is so abundant as Vivianite and rare as Dufrenite, is doubtless formed by the reaction of the sulphate or carbonate of iron with the phosphate of lime of the entombed fossils. The instances of the substitution of bases taking place among phosphates, are not so rare as Dr. Piggot supposes; and it will, I am sure, need only a request through your journal, to the gentleman reading it, to observe in the marshes, where the formation of bog iron ore is in constant progress, in which bones of animals may have been entombed—which, by the action of the carbonate of iron in the soil, are converted into phosphates of iron. In some instances the appearance of the bones may be but little changed, with the exception of slight blue spots, but by breaking, crystals of Vivianite will probably be found in the interior. There is a remarkable instance of the occurrence of Vivianite, in the Calamine mine of Scharley, in Silesia; a skeleton of a man was found, in which the mass of the bone was converted into this mineral. Phosphates of copper and phosphates of lead are frequently found at the surfaces of metallic

lodes, in the neighborhood of fissures, which clearly show that the water containing the phosphates, (probably phosphate of lime) was derived from the phosphate of the rock, or from the organic remains in it. Bischof farther records instances of tertiary fossils converted into Vivianite; I have also in my cabinet, specimens of Vivianite in the form of belemites. Many other instances might be recorded, did space permit.

I am surprised that Dr. Piggot should think that I disregard geological cycles; the time in which the formations and decompositions have occurred in, cannot be conjectured with any great degree of certainty, until our information is greater. I subjoin an extract from my Investigation, which is a compendium of the most reliable information which could be obtained from those visiting the Islands: "The islands of the Caribbean Sea are very varied; some are quite low, and covered with sand, composed of fragments of shells, madrepore and corals, which can readily be distinguished with a pocket lens. These are resorted to by myriads of water fowl, for laying their eggs. . . . Other islands attain heights of 800 feet; it seems improbable that such heights could be created by accretions of guano and sand, when the islands are subject to a continued action of the waves of the ocean. The inclination and irregularity of the guano layers, renders it not improbable, that the dynamic causes which produced this distortion, elevated at the same time the islands." "These islands are in a volcanic region, being within 150 miles of Guadaloupe."

Dr. Piggot objects to my remarks as to the sources of phosphoric acid, and even questions the high authority of Bischof, that in all probability, the phosphoric acid which now exists in minerals, has most probably circulated in the organisms of plants and animals. In the October number of your journal, the interesting and scientific communication of Hon. T. G. Clemson, on "Microscopic Organisms," illustrates in a beautiful manner this economy of nature; the extract contained in it, from the valuable work of Mr. Elie de Braumont, traces in such a masterly manner the reasons which I have given from Bischof, that it will be only necessary for me to refer your readers to "Microscopic Organisms," which I think will convince them that this subject may well receive the special attention of political economists. Phosphoric acid is doubtless coeval with the world; it exists in the basaltic rocks and lavas, which are of all ages, from which it has circulated in the vegetation on their surfaces, or formed one of the principal components of minerals; by means of water saturated with carbonic acid, these were in their turn decomposed, the phosphoric acid passing into plant organisms, and from thence into animal organisms, forming one of the chief constituents of bones. By the decay of organised substances, it again returns to the mineral state, and furnishes material for the formation of phosphates, such as Vivianite.

With regard to the mineralogical characteristics (which practically are not important,) I am obliged to adhere to my original opinion, notwithstanding that Dr. Piggot thinks otherwise, and I am satisfied to submit the specimens, on which my conclusions are based, to the judgment of the eminent mineralogists, Profs. Dana and Brush, of New Haven, and Dr. F. A. Genth, of Philadelphia.

Respectfully yours, J. W. TAYLOR.

Worcester Co., Dec. 11th, 1857.

DR. BALDWIN'S THEORY.

To the Editors of the American Farmer:

I observed in the December No. of the American Farmer, a few remarks of the senior editor of that journal, under the head of "Application of Manure to the Soil," which prove that he has totally mis-apprehended my views in relation to agricultural science. So far from claiming credit for original views in relation to the application of manure to the surface, (as he supposes) I have been zealously endeavoring to prove to the farmer, that he may successfully dispense with the use of manure altogether. From the high character and acknowledged ability of the senior editor of that journal, I presume that this strange misconception must have arisen from the circumstance that the subject has been so recently "pressed upon his attention." If the senior editor will do me the favor to publish my propositions in his journal, as he finds them in the "Plough, Loom and Anvil," published in October, 1850, by Mr. Skinner, and thus bring the subject fairly before his readers, I can assure the senior editor that he need not refrain, out of "respect to my feelings," from correcting my erroneous opinions, or from justly rebuking any vain assumptions of originality of ideas, which he may suppose they contain.

Respectfully, R. T. BALDWIN.

[We give the above, with the remark, that the subject *has* been "*pressed upon our attention*," in an anomalous manner, recently, though if we remember aright, it has on several previous occasions been attempted to be urged upon us by Dr. B., or others who seemed to be peculiarly interested in drawing public attention to it; but the idea that the farmer "may successfully dispense with the use of manure altogether," was so inconsistent with reason, in our view of the subject, we must admit, (with all due deference to the Dr.) that we deemed it unnecessary to renew attention to it in our pages. We, however, publish the following, from an anonymous correspondent, who, although signing himself an "old friend" and well wisher, has not thought proper to give us his real name. From this communication, the Dr's theory may, perhaps, be apprehended by the reader, as we have not the volume at hand to which Dr. B. refers.—ED.]

To the Editors of the American Farmer:

In the December No. of your most interesting and valuable journal, you say: "With regard to surface manuring, the property of ownership does not belong to Dr. Baldwin; it was started in England more than a century ago," &c., &c.

I have for many years been a careful observer of Dr. Baldwin's theory of improving the science (if it may so be called) of agriculture, and must confess my great surprise at your view of that theory. I understand Dr. Baldwin's views to be: That nothing constitutes the aliment of vegetable life but that which has directly or indirectly passed into the putrefactive process; or in his own words, the residue of putrefaction—that if you put a plant in an exhausted soil, nothing in the form of carbonates, phosphates, sulphates, &c., &c., will make that plant grow; and that nothing but manure will effect that object—and that nothing but that which

has passed into the putrefactive process is manure. This position being assumed—and as far as my experience and observation goes, it is impregnable—the Dr. then goes on to say, that he finds that where the surface of the earth is covered in such a way, as would promote the putrefactive process in other cases—that the surface of the earth becomes so changed as to be eminently fertile, and to an extent almost incredible; and *from his first proposition* he *infers*—and I think legitimately—that the surface of the earth itself undergoes the putrefactive process; the difference in the appearance of the surface soil before it was covered, and that after, showing plainly that it has undergone a *chemical* change. Hence Dr. Baldwin's discovery is: that the surface of the earth itself undergoes, *where it is covered*, the putrefactive process. He uses the word "shaded;" I think covered is better; but there is no use in disputing about terms.

This, if it be true, and I do not doubt it, constitutes, as was said by the venerable Editor of the Plough, Loom and Anvil, an epoch in agriculture. And this is unquestionably a discovery; for old as I am, I have never heard of that position ever having been taken by any man, either in the books or out of the books.

Of course Dr. Baldwin would use manures on the surface, because he not only gets the benefit of the manure as an *aliment*, but he also gets the benefit of the same article as a *covering* substance, starting and continuing the putrefactive process on the surface which it overlays.

On page 203 of your December number, you publish some experiments, from an Edinburg journal, which go to sustain the Dr's theory.

There is certainly great simplicity and beauty in this theory of Dr. Baldwin's. It gives *one* mode of sustaining and promoting vegetable life. All organic substances die, and more or less pass into the putrefactive process; but they return again, and vivify the earth. Nature never works but by *one* law, to produce *the same result*. Let us try to find what that law is in the great chemical laboratory of Nature; and the farmer will no longer be bandied about like a trap-ball, by every *new* chemical experiment.

YOUR OLD FRIEND & WELL WISHER.

Henrico County, Va.

MOLASSES FROM THE "MITCHELL" APPLE.—With the following note, we received a sample of the molasses or syrup alluded to; the taste of which so nearly resembles that of the Chinese Sugar Cane, that we would not have hesitated to pronounce it the same:

BELLEVOIR, Dec. 15th, 1857.

To the Editors of the American Farmer:

GENTLEMEN:—The numerous experiments made the past fall on the "Chinese Sugar Cane," induced Mr. John Mace, of this county, to test the properties of *cider*, made from the Mitchell Apple, a variety peculiar to this (Dorchester) county. I send you a sample of the *syrup;* it retains somewhat the flavour of the fruit, and is both rich and pleasant.

The yield was, if anything, greater than that from the "Sorgho," having from three gallons of cider, made rather more more than three quarts of syrup. The sample sent, he says, might be greatly improved, as the cider was made early in the season, and a considerable portion of the fruit unsound. I do not know that the experiment will be of any practical benefit, but may induce others to carry it further.

Yours truly, R. T. GOLDSBOROUGH.

NEW OXFORDSHIRE SHEEP.

A correspondent of the Country Gentleman, Mr. Jno. M. Larmouth, of Oneida county, N. Y. thus speaks of this valuable breed of sheep:—

"The raising of fine wool has long been, here, unprofitable, and while considering what stock I would substitute, I noticed occasionally articles in the Cultivator from those who had recently purchased the sheep called the New Oxfordshire, describing them as just the variety I wanted. I had never seen them, but relying on the representations of them, at last determined to venture on a small purchase, and ordered from John T. Andrew, Esq., of West Cornwall, Ct., a pair of New Oxfordshire lambs. In due time they reached me in good order, and gave me an agreeable surprise. My highest expectations were more than realized. I had seen beautiful animals at our fairs, and noticed the sheep particularly, but had never seen anything approaching the appearance of these beautiful animals. They were only seven months old, and weighed two hundred and fifty-five pounds. They had great square forms, short limbs, set wide apart, long, white, silky wool, small bones, fine little heads, large prominent eyes; and most intelligent countenances. They were perfectly gentle, would not roam, and loved to be petted. With ordinary care they grew rapidly through the winter, and on the 11th of April the ewe lamb, not then a year old, surprised me with a fine male lamb.

"About the first of June my two lambs were shorn, and yielded twenty-one pounds of clean and beautiful wool, about a foot long, a specimen of which I send enclosed. At the shearing, my buck, a year old, weighed 168 lbs. The infant lamb, eight weeks old, weighed 48 lbs.

"On the 21st of August they were weighed again. The yearling buck weighed 190 lbs.; the nursing yearling ewe weighed 130 lbs., and their baby, four months and nine days old, weighed 100 lbs.!

"In the month of September I was obliged to shut them up at night on account of dogs, and they lost weight—the buck 20 lbs., and the lamb 10 lbs. While attending the fairs they gained nothing.—They now have their liberty, and are gaining finely. On the last of October last, they weighed, notwithstanding their confinement, the yearling buck 190 lbs., the ewe 160 lbs., and the little one 125 lbs.!

"I exhibited my lambs at our County fair, and also at the fair of Jefferson County. They took prizes at both. They have a great many visitors, who pronounce them the finest they ever saw. I am fully satisfied with them, and intend to procure an addition to my flock. They are so large, hardy, prolific, and as objects of taste, so ornamental, that they must prove profitable."

LARGE PORKERS.—Mr. W. B. Hamilton, of Sweet Air, Baltimore county, has slaughtered two Chester hogs, about two years old, one of which weighed 444 lbs., the other 542 lbs. Wm. Pole, Esq., late Sheriff of same county, slaughtered three hogs, less than a year old, which weighed 815 lbs. Mr. John Diffenderffer, of Winchester, Va., slaughtered two hogs, 16 months old, one of which weighed 475½, and the other 412½ lbs.

BONE DUST AND POUDRETTE,

WARRANTED free from any mixture, having the Bone Dust in its natural or pure state. Fine or Stamped, by the bushel or ton.

POUDRETTE—a superior article and the cheapest Manure in the market—well adapted for Corn or any crop in the drill or hill.

References:—John W. Randolph and M. B. Worthington, Baltimore; Thomas S. Mezeek and John Ridout, Annapolis; R. G. Browstor and J. Mouil, New Jersey. The above named practical Farmers will testify to its merits.

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Orders left at the American Farmer office will be attended to. dec.1 THOMAS BAYNES.

FOR SALE,

THE Imported Alderney (or Jersey) bull COMMODORE, caived 1852. Second Prize bull under two years, in the Island of Jersey, 1854. Imported August, 1854.

First Premium for Imp. Alderney Bull under 3 years, Maryland State Show 1854.

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First Premium for Jersey Bull, U. S. Ag. Society's Show, at Philadelphia, 1856.

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PRICE $200.

Jersey Bull MIDSHIPMAN—Calved April 11, 1854—Sired on the Island of Jersey—Dam Imported Gazelle.

Second Premium Alderney Bull, under 2 years old, Maryland State Show 1855.

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Price, $150.

Jersey Bull Calves under one year—PRICE $50.

Imp. Devon Bull RED ROSE, (Davy's Herd Book, 290)
Sire Earl of Exeter, " " " 38)
Dam Dairy Maid, " " " 107)

Bred by Mr. James Quartly, of Molland, Devon. Calved March, 1853. Imported August, 1854.

First Premium Imp. Devon Bull, between 1 and 2 years, Maryland State Show 1854.

First Premium Imported Devon Bull, Maryland State Show 1856.

PRICE $250.

J. HOWARD McHENRY,

aul-tf PIKESVILLE, BALTIMORE COUNTY, MD.

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THOROUGH BRED AYRSHIRES FOR SALE.

BEING overstocked, I offer for Sale 25 head of thorough bred Ayrshire Cattle, Bulls, Cows and Heifers, from 1 month to 10 years old, at prices ranging from $25 to $200. Purchasers at a distance may rely upon having their orders filled as fairly as those who apply in person.

RAMSAY McHENRY,

aul-tf *Emmorton, Harford County, Maryland.*

AFRICAN GUANO.

WE HAVE a lot of this guano, with 6 or 7 per cent. ammonia, which is worthy attention. Also Peruvian, Colombian and Mexican Guanos, at lowest prices.

S. SANDS & WORTHINGTON, Farmer Office.

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PIANOS! PIANOS!!

WAREROOMS, 181 BALTIMORE STREET, AND 84 WEST FAYETTE STREET,

Immediately in the rear of the splendid Dry Goods establishment of Messrs. McElderwney, on the corner of Charles and Fayette streets.

THE attention of those desiring a very superior PIANO, is called to the celebrated Pianos of NUNNS & CLARK, AND CHICKERING & SONS.

They contain all the improvements of any real value, and their instruments have been thoroughly tested for the past 35 years, and are unquestionably the best Pianos made. They possess remarkable sweetness of tone, action beautifully even, and light of touch, rapidly responsive, and capable of immense power.

Also, a complete assortment of Rosenkranz's Pianos, with all the late improvements, at very low prices. Address

oct 1 F. D. BENTEEN, Baltimore.

GRAND AND SQUARE PIANO FORTES.

HENRY HARTGE & CO., MANUFACTURERS OF GRAND & SQUARE PIANO FORTES, *No.* 121 *Franklin street, near Eutaw*, where may be found Pianos which for elegance of finish, and sweetness of tone, and agreeable touch are second to none in the country. jyl-1yr

GREAT IMPROVEMENT IN THE MANUFACTURE OF WOOD TUBE, For Chain Pumps, Water Pipe, &c.

G. K. TYLER & CO. have at their *Steam Saw Mill, corner of Wolf and Fell streets, Baltimore, Md.*, one of WYCOFF'S BORING MACHINES, and are now prepared to manufacture Tube for Chain Pumps, Pipe for conducting water, and various other purposes. It is made of white pine or other soft wood scantling, in sections eight feet long, with socket joints, water tight, and can be well laid by any common laborer. They are, in many respects, preferable to Lead or Iron Pipes,—being quite as durable, less likely to contaminate the water, and not more than one-third of the cost.

Farmers, Railroads, Mining Companies and others who wish to convey water, will find it to their interest to investigate this matter. What greater luxury can a farmer have than PURE RUNNING WATER at his house and barn? It not only promotes the health of man and beast, but saves both time and money.

Prompt attention to all orders addressed to

G. K. TYLER & CO.

jyl-1y Corner of Pratt & Patterson sts., Baltimore.

NOTICE.

THE Roslin Tile Works are now prepared to furnish to farmers and others, Tile for under and surface draining, at the following prices:—

2	inch	Pipe Tile at	$15 per thousand.
3	"	"	20 "
4	"	"	25 "
2	"	Horse-shoe Tile,	12 "
3	"	"	15 "
4	"	"	20 "

☞All orders sent to the works, or to GEO. V. SCOTT & Co., Agents, Petersburg, Va., will receive prompt attention. Samples of each kind may be seen at the office of E. WHITMAN & Co., Baltimore.

jyl-1y WM. Y. KEESTER.

A POSITIVE CURE FOR CANCER,

WITHOUT THE USE OF CAUSTIC OR THE KNIFE.

Reliable and uniform in its effects in all cases, and proved, beyond a possible doubt, in every case to which it has been applied.

The undersigned will guarantee a cure of all external Cancer where Vital Parts are not involved, before the application is made. As the wonderful effects of this remedy is now pretty well known, it is deemed needless to say more than what is expressed above.

A pamphlet giving the full description of cures and the manner of treatment, with other information on the nature and character of Cancer, sent to all persons requiring the knowledge it contains. Address, JOHN CATHERS,

may 1—1y Office No. 102 Baltimore st. Baltimore.

J. MONTGOMERY & BRO.

DOUBLE SCREENED ROCKAWAY, GRAIN FAN.

The best Fan in the United States!

PRICE $35.

The above cut is a representation of the Double Screened Rockaway Grain Fan, in full operation. It is manufactured and for sale by the Patantees at 151, 153 & 155 *North High street*, between Hillen and Gay sts., Baltimore, Md.

It was patented December 20th, 1853—again, June 12th, 1855, and last improvement, January 20th, 1857. The recent improvement enable us to offer a *perfect machine*—the very best Fan ever offered to the Farmer, the Trade, or the Manufacturer. Its superiority has been acknowledged by all who have used or seen it used and certain are we, that in this particular Implement, adapted as it is, to ALL KINDS of grain, the South, by our invention, has outvied the North or East—as it is incomparably superior to all inventions of this kind—we challenge competition from whatever quarter it may come. We have a large stock of the best materials on hand, and are prepared to deliver 800 Fans in due time this season, and solicit orders.

It will be seen by reference to the proceedings of the different Agricultural Societies of Maryland, Virginia, Delaware, North Corolina and South Carolina, that our Fan has been at nearly all the State and County Fairs, and took the FIRST PREMIUM over all others, for the last five years.

NOTICE.—We offer our services to our friends who need Agricultural Implements and Machinery of any description, to purchase the same for them, guaranteing them the best in the market.

Patent Rights for sale, and Patterns complete, with all the information necessary for manufacturing.

THE FOLLOWING TESTIMONIALS ARE SUBMITTED:

DINWIDDIE CO., VA., Nov. 26th, 1856.

Messrs. J. Montgomery & Bro.

Without any solicitation, I do say with pleasure, that your truly celebrated Rockaway Fan, exceeds my most sanguine expectation in doing its work. I have used it with perfect satisfaction for two years past, it cleans faster and better than any I have ever tried. I believe it saved me the first year in cleaning my crop more than its cost; it is just the Fan the farmer wants and needs, therefore, I can safely recommend it to the Agricultural Community.

Respectfully, yours, &c.,

THOMAS B. HAMLIN.

We are of opinion that the Wheat Fan of J. Montgomery & Bro. will in a day fan out more wheat and do it cleaner than any Fan we ever saw tried. We can, with the utmost confidence recommend it to the farmers of Virginia.

JOHN OSBORNE,
SAML. C. LEGRAND.
of Charlotte Co., Virginia.

Your Fan is a perfect machine, doing all that is claimed for it, and answering the highest expectations.

J. R. COUPLAND,
Stony Point, near Yorktown, Va.

All orders addressed to the undersigned, at Baltimore City (Md.) Post office, will be promptly attended to.

J. MONTGOMERY & BRO.,
No. 155 N. High street, between Hillen and Gay, Balto.
mar1-1y

MARYLAND
AGRICULTURAL IMPLEMENT WORKS.

SAMUEL COTTINGHAM

WOULD call the attention of Farmers and Dealers to his large stock of FARMING IMPLEMENTS for the Spring Business. He would name in part the following:—

Ploughs in their variety, Cultivators, Harrows, Corn Shellers, Wheat Reapers and Mowers, McCormick's, Ray's and Manney's patents, and has in store and for sale, Pelton's Patent Internal Geared Power, and also the Geared Thrasher, which supersedes the necessity of the leather belt. These Machines are worthy the attention of the farmer. There are three sizes—4, 6 and 8 horse power.

The undersigned would also call the special attention of the farmer to a NEW HAY CUTTER, gotten up by the subscriber the past winter, cheap and good, and not liable to get out of order.

Plough and machine castings by the quantity or single piece. Garden and Field Seeds, Shovels, Forks, Ox-yokes, Scott's Little Giant, and many other Implements too numerous to mention in an advertisement.

My manufactory is in full operation, which will enable me to keep up a first class stock of implements, not to be surpassed by any similar establishment.

Repairing of all kinds done with neatness and dispatch.

Call and examine for yourselves, before purchasing elsewhere.

SAMUEL COTTINGHAM,
(Formerly Cottingham & Johnson,)
mh1-1y No. 150 PRATT STREET WHARF, BALTO., MD.

AGRICULTURAL IMPLEMENTS, MACHINERY, &C.

THOMAS NORRIS,

(OF THE LATE FIRM OF RICE & NORRIS,)

WOULD respectfully inform his friends and customers, farmers and dealers generally, that he is prepared to furnish as heretofore, all that is useful and valuable in the way of Agricultural Implements, Machinery and Garden Tools, Field and Garden Seeds. It would be too much of a task to name the almost innumerable variety of Implements—would say that there is scarcely anything in his line from the oldest to the latest improvement, or newly invented article that he is not prepared to furnish on equal terms with any other houses in the city. He would particularly call the attention of farmers to MANNY'S REAPER and MOWER, which gave so much satisfaction last season. It is now ready for the approaching harvest, improved in all points indicating the slightest defect heretofore, and is now doubtless the very best combined Machine in the market; order early if you would secure this Machine.

GRAIN DRILLS.—Those in want of a good and reliable Grain Drill, with Guano or Seed Attachment, can only have their expectations fully met by purchasing BICKFORD & HUFFMAN'S DRILL, the *only efficient* Guano distributor I have any knowledge of; order this Machine early, or you may be disappointed, as many were last season, by ordering too late.

DEWEY'S PATENT WIRE SPRING GLEANER.—Every farmer should have this valuable implement, by which *all* the wheat may be saved.

GRANT'S Grain Cradles, WOLFE'S ditto, with best English Scythes, Grass Scythes and Snathes, Revolving and Independent Teeth Horse Rakes, Large Hand or Loafer Rakes, the *very best* hand Grain and Hay Rakes in the market, made for *real service*. VANWICKLE'S Wheat Fans, *warranted* to give entire satisfaction. MONTGOMERY'S Rockaway Fan, well known as a good Fanning Mill.

Horse Powers and Threshing Machines, of various sizes and prices, which give the best satisfaction to all that have tried them. Ploughs of every description. Cultivators, Harrows, Hoes, Spades, Shovels, Forks, Straw Cutters, Corn and Cob Crushers, Farm Mills, &c., &c. Garden, Field and Flower Seeds, &c., &c.

THOMAS NORRIS,
aul *Agricultural Store, No. 48 Light St., Balt.*

JOB PRINTING of every description executed in the best style, at the "Farmer" printing office.

THESE MACHINES are unquestionably the *best* in the market. No well regulated family can afford to do without a GROVER & BAKER SEWING MACHINE, made expressly for family sewing.

Merchants in good standing from abroad, visiting New York or Boston, can now secure the sale of Grover & Baker's Sewing Machines in their several localities, with great profit to themselves, and advantage to their customers.

GROVER & BAKER,
Sewing Machine Co., 495 Broadway, N. Y.
18 Summer street, Boston.
730 Chesnut street, Philadelphia.
87 Fourth street, St. Louis, Mo.
oct1-3m 6 West 4th street, Cincinnati, Ohio.

MAKE WAY FOR THE PREMIUM HAY, STRAW & STALK CRUSHER & CUTTER.

CUMINGS' PATENT SELF-FEEDING FOUR KNIFE MAGIC CUTTER.—The most durable, perfect and easiest worked machine of the kind in use. Capacity from two to five bushels per minute. With it you may crush and cut your longest stalks, and if requisite the ear and husk also, by hand-power. For cutting Hay and Straw, it is unapproachable.

☞ **Price, only Thirty-Three Dollars,** and satisfaction guaranteed.

To secure one of those admirable Machines, send your orders early to A. G. MOTT, *No.* 40 *Ensor street, Baltimore,* who is still engaged in the manufacture and sale of Agricultural Implements. Here among other Implements, you may find the world-renown'd Wiley, Empire and Minor & Horton Plows, of all sizes, and all of the very superior composition, chilled metal. dec.1

FOR SALE,

ALDERNEY CATTLE AND BLACK HAWK HORSES.

5 ALDERNEY BULL CALVES of the following ages, all thorough bred, 8, 8, 4, 2 & 1 month, all by a bull got in the Isle of Jersey, and the three youngest out of imported cows. Also a fine young Alderney Cow, 2 years and 5 months old, believed to be in calf. Also an Alderney Cow, about same age, with a heifer Calf by her side.

ALSO 2 Stallion Colts, 2½ years old, bay and black, both by Ticonderoga Black Hawk: the bay is out of a fast trotting Hamiltonian mare, and the black out of a very fast mare got by the original Black Hawk. Apply to

S. SANDS & WORTHINGTON, Farmer Office.
decl-1t

MANURES FOR SALE,

PERUVIAN GUANO, No. 1,
COLOMBIAN GUANO,
MEXICAN GUANO, } BEST QUALITY.
AFRICAN GUANO,
BONE DUST, from the best Factories.
GROUND PLASTER, &c.
All at the Lowest Market Prices. Apply to
S. SANDS & WORTHINGTON,
decl-tf Office "American Farmer."

A Valuable Farm in Culpepper Co., Va., FOR SALE.

OWING to infirm health I have determined to sell my farm the "HERMITAGE," containing about four hundred and fifty acres. To an industrious, enterprising man this farm offers strong inducements to invest. The price at which it is offered ($15 per acre) is considered low by those acquainted with the productiveness of the soil.—Situated in Culpepper Co., Va., on the waters of Crooked Run, one mile distant from Wayland's Merchant Mills, and five miles from the Orange and Alexandria Railroad. Climate healthy and salubrious. About one-fourth of the land is in timber of original growth, abounding in chesnut and locust, and loose rock sufficient to enclose the entire farm. Improvements comfortable, and a young orchard of choice grafted fruit.

Communications addressed to my son, DANIEL J. GARNETT, (who lives on the premises,) will meet with prompt attention; who will also take pleasure in showing the farm to any one wishing to examine it. His address is Waylandsburg, Culpepper county, Va.
oct1-tf WILLIAM GARNETT.

A VALUABLE FARM FOR SALE,

CONTAINING seven hundred and twenty-two (722) acres, lying in the North Garden, Albemarle Co., Va. It is situated within one mile of a contemplated depot, on the Charlottesville and Lynchburg (an extension of the Orange and Alexandria) Railroad, and within five miles of a depot on the Virginia Central Railroad—in the midst of a cove formed by the surrounding mountains.—The soil is principally the dark red clay soil of the Piedmont country, superior alike for its productiveness and susceptibility and retention of improvement. There are between 4 and 500 acres under cultivation—including 150 acres of bottom land producing finely without manures—the greater portion of the whole being seeded in clover. The improvements consist of a Brick Dwelling House, 47 by 38 feet, containing twelve rooms, Out Houses, Tobacco Houses, &c. $35 per acre will be taken for the Farm—it was heretofore held at upwards of $40 per acre—but having disposed of his other lands, and the owner intending to go South, will dispose of it at the above named price.

S. SANDS & WORTHINGTON,
oct1-tf *Office American Farmer.*

MARYLAND SAW

MANUFACTORY.

HENRY C. BROWN & CO., Manufacturers of every description of CAST STEEL SAWS, UHLER'S ALLEY, one door from Charles street, between Lombard and Pratt, Baltimore, Md., keep constantly on hand an assortment of SAWS, of every description; naming, in part: Mill, Pit, Cross-Cut and Circular Saws, from 1 to 56 inches; larger ones made to order; also, Mandrills, Boxes, &c. Awarded a Gold Medal in 1856 at the Maryland Institute for Saws.
dec.1-1yr.

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ADVERTISING SHEET.

AGENCY
FOR THE PURCHASE OF GUANOS
AND OTHER MANURES,

AGRICULTURAL IMPLEMENTS, STOCK OF ALL KINDS, &c., &c.

The subscribers continue their Agency for the purchase of PERUVIAN, COLOMBIAN, MEXICAN and other GUANOS, and the various manufactured MANURES, and those who may entrust their purchases to them, may rest assured of obtaining the purest and best articles. Orders must be accompanied with the cash to secure prompt attention.

S. SANDS & WORTHINGTON,
Publishers American Farmer, Baltimore, Md.

THE LITTLE BRICK MAKER.

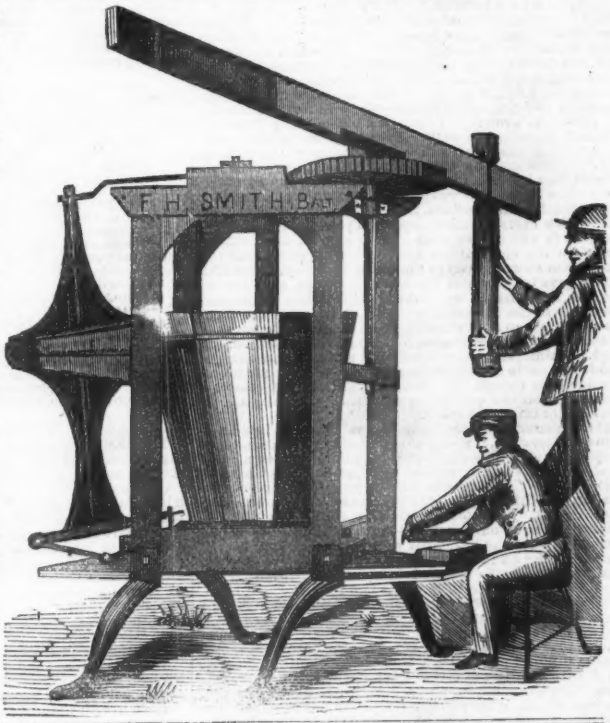
The NEW MACHINE is now reduced in size, so as to be driven by one man. It takes the rough clay, previously one night in soak; tempers and moulds 420 bricks per hour, attended by two men and four boys. The brick is beautiful. Thus every farmer can be his own brick maker, as it requires only common laborers.

Price, $70.

The larger machines worked by a horse, making 7000 per day, $150; 10,000, $200—by steam 16,000, $250—25,000, $400.

For further particulars in a pamphlet, giving full instructions on brick setting and burning, address,

FRANCIS H. SMITH,
SUN BUILDING,
oct 1-tf *Baltimore.*



1000 PLOWS, now in Store and for sale by E. WHITMAN & Co.

100 TONS PLOW CASTINGS, on hand and for sale by
E. WHITMAN & CO.

100 "YOUNG AMERICA" CORN MILLS, for sale by
E. WHITMAN & Co.
No. 63 Exchange Place, Baltimore, Md.

COLOMBIAN GUANO.

Philadelphia Guano Company,

No. 5 O'DONNELL'S WHARF, BALTIMORE.

It can hardly be necessary to call the attention of the intelligent farmer to this most valuable manure. It has been tried quite extensively throughout this state and Virginia, as well as in many Southern States, and we are continually receiving the most flattering accounts of its action upon the soil. In the majority of cases, it is unquestionably the most valuable fertilizer ever presented to the public. Its superiority over Peruvian as a permanent manure is too well known to require any elucidation from us. The following remarks, however, may place the subject in its true light in the eyes of those who have not yet become acquainted with its merits.

The theory of the action of this guano is very simple. The growing plant must have a certain amount of inorganic matter, or it cannot thrive. Chlorine, sulphuric acid, soda, silica, lime, phosphoric acid, alumina, iron and other ingredients are all needed for the full and complete development of the plant. If the soil possess these substances in sufficient quantity, there is no difficulty in forcing an abundant growth. This is the reason why Peruvian guano is succeeded so well on the poor lands of this State. Lying idle or comparatively so, for a number of years they have accumulated by the gradual decomposition of the subsoil, and by the action of the scanty vegetation which grew upon them, a large stock of inorganic matters, but being deficient in ammonia, they needed the peculiar stimulus which that substance imparts to vegetation. The feeble growth which they were able to sustain, could not appropriate the elements so abundantly supplied, and the crops upon them starved in the midst of plenty. Peruvian Guano gave to the plants the necessary vigor, and enabled them to draw freely upon these great stores of mineral matters. It has been demonstrated, however, that Peruvian Guano does not in itself possess a sufficient amount of of these inorganic substances to keep up the fertility of the land. A time, therefore, inevitably arrives when this guano is incapable of augmenting the growth of plants to any considerable extent. By forcing vegetation, it creates a demand upon the soil for its inorganic materials, and to that extent impoverishes it.

If the character of the staple crops of Maryland be taken into consideration, it is easy to see what inorganic substance is most heavily drawn upon. Indian Corn, as shown by all analysis of its ashes, consumes a prodigious amount of phosphates. Tobacco also takes a great deal of inorganic matter, and this is permanently removed, as the whole crop is sent away. Live stock diminishes the amount of Phosphates by the amount required for their bones. It is evident then that the principal drain upon the soil is that which carries off the Phosphates. It is also perfectly clear that these must be restored in some way, if the farmer would keep up the fertility of his land.

To get these important ingredients he must resort to bone dust, to Mexican, or to Colombian Guano. Of the former article there is a limited supply, and for the amount of phosphoric acid it contains, the price is high. Mexican Guano supplies phosphate of lime cheaply and abundantly. In it the phosphate of lime is believed to exist in the same state of combination in which it occurs in bones. In Colombian Guano, however, it is found in a different form, the peculiar advantages will be understood by perusing the following extract from Dr. Piggot's report:

You have requested me to state the advantages which might be expected to be derived from this fertilizer in view of its chemical constitution. The first and most evident, is the uncommonly large proportion of Phosphoric Acid which it contains. It is by far the richest known source of this valuable substance. The amount of phosphoric acid which is contained in the 87.95 parts of neutral phosphate of lime, belonging to the sample analyzed, would, if combined with lime, in the proportion to form bone-phosphate, make 100 14 parts of that compound. Hence it follows, as a matter of necessity, that in the decomposition of this manure in the soil, about 12 per cent. more phosphoric acid will be given to the plant, than could possibly be extracted from the same quantity of bone earth, by the same solvents.

Another important consideration, is the greater solubility of this phosphate in ammoniated water. As all rain water, and most soils, contain ammonia, and as the organic part of this guano, when decomposed, generates a small quantity of the same alkali, the manure, while in the soil, will be acted upon by water, holding ammonia in solution. Now, this induces in the neutral phosphate a change which does not take place in bone earth. On the latter, it has no action whatever, but it converts the former into bone phosphate, by combining with a portion of phosphoric acid, to form phosphate of ammonia. Colombian Guano may therefore be regarded as playing a very important part in the fixation of the volatile alkali.

The permanency of this manure is a matter so well understood by every practical farmer, that it requires no comment.

Very respectfully yours, &c., A. SNOWDEN PIGGOT.

OFFICE INSPECTOR OF GUANO, 11 Exchange Building.

Analysis of an average sample of "Colombian Guano," imported by Wm. F. Murdoch, Esq., Agent of the "Philadelphia Guano Company," March 17th, 1856, in the "Mary Elizabeth."

Phosphoric Acid, - - - - - - -	40.25
Lime, &c., - - - - - - - -	59.75

40.25 per cent. of Phosphoric Acid is equal to 87.21 per cent. of Bone Phosphate of Lime. WM. SMITH REESE.

CHARACTERISTICS OF COLOMBIAN GUANO.

1.—It is by far the richest source of phosphoric acid for the farmer yet known, containing one-third more than ground bones.

2.—It contains less than one-fourth of the water always present in the Peruvian, and 20 to 30 per cent. less than any other guano—consequently, it can be packed in bags, at a diminution of one-fourth the freight and packages, besides the convenience of handling, and subsequent value of bags.

3.—It is sold in fine powder, and does not require sieving, as do the Peruvian and other Guanos, in order to their uniform application.

4.—It does not injure the nails of the laborer in sowing, on account of the absence of lumps, and for the same reason it can be applied in one-half the time, with a drill, with perfect uniformity. Whereas, guano containing lumps cannot be distributed uniformly, even with the aid of a drill.

DAVID STEWART, M. D.,
Chemist of Md. State Agricultural Society

The practical value of this guano will be perceived by the following extract from the American Farmer, giving actual results of direct experiment:

COLOMBIAN GUANO.—We have heard casually of some trials of the Colombian Guano, showing very favorable results from its application, and have reason in our own experience to be much pleased with it, where we have been able to give it a fair trial; especially as to the permanency of its action. A statement from Mr. J. W. Brown, a farmer of Prince George's County, gives very strong testimony in its favor, estimating its effects upon corn last year as one third greater than Peruvian or Manipulated Guano used in same quantity, and thus far this season superior to Peruvian on wheat. We should be very glad to hear from others of our subscribers who have used it.

We have been at some pains to determine the best fertilizer for this crop from the experience of practical men, and do not hesitate in our preference for a combination of Peruvian with Colombian or Mexican Guano. The writer has now such emphatic evidence on the growing crop of wheat, of the permanent effect of the Colombian Guano obtained from the Philadelphia Guano Co., and applied the first week of last June, that he gives that the preference decidedly over the Mexican for his own land. The experience of others satisfies them with the Mexican, and its lower price recommends it. The combination and thorough mixing of either of these with Peruvian, will produce probably the greatest effect of both. This mixing is not essential, however, and they may be, and are most usually applied separately. Peruvian Guano alone ensures a good crop—Mexican alone a poor crop—but Peruvian and Mexican together, a crop much superior to Peruvian alone. An intelligent correspondent of the Petersburg Farmer, Mr. R. H. Crawley, in narrating his experiment of last

year, says: "The difference in favor of that portion of the field which had the application, both of Peruvian and Mexican, was so perceptible as to make a streak through the field, which could be perceived half a mile throughout the growth, and when it came to the knife I am certain that one plant was worth two; and after it was cured, I think I could have picked nearly every plant out, though it was mixed in the barns."

We also call attention to the following from Pennsylvania:

COLOMBIAN GUANO.

Col. Samuel Rengwalt, a very intelligent and successful farmer in Chester County, Pennsylvania, states: "The result of my experience in the use of Colombian Guano are of the most favorable character. Aware that the fertility of the soil could only be preserved by restoring to it the phosphates of which it is so largely deprived by every crop, I was not prepared for such decided benefits as I heve realized. Its effect upon my corn crop was so marked as to attract the attention of every observer. It was my first experiment with it. The circumstances under which it was made were favorable for affording a fair test. In adjoining fields, the soil of which was of the same character, and equally well tilled, my neighbor and myself planted our corn, determined to omit nothing to ensure a good yield. The season (that of 1856) was unfavorable from protracted drought. I applied the Guano by mixing about 200 lbs. of plaster of paris to 100 lbs. of the former. About four table spoonfulls were scattered to each hill—dropping the corn on it and covering it with earth about 3½ inches deep.

My neighbor, an excellent farmer, relied upon the ordinary fertilizers. A very marked difference in the crops of the two fields soon became apparent. The plants in mine grew vigorously and attained great size. The principal benefit however, was exhibited where it was most wanted, and which is characteristic of the phosphates, viz: in the ears. They were of unusual size, found not here and there, but uniformly throughout the entire field. My yield was 100 bushels to the acre.

The crop of my neighbor was stinted—the ears very small and the yield not over 30 bushels to the acre.

Nor have the advantages derived from it as a top-dressing to our grass fields been less decided. He adds further that the Colombian Guano was extensively used last fall, by farmers in this and the adjoining townships, on their wheat crops, with the most encouraging results."

Dr. Webb, on one of his farms in New Jersey, where the Colombian Guano was used, reports the most decided benefits to have resulted.

W. J. Taylor, Esq., a gentleman of great intelligence, and eminent as an agricultural chemist, in a letter dated in Worcester County, Maryland, May 25th, 1857, states: "It is with pleasure I write you of the satisfaction gentlemen express in this section of the country, who have made use of the Rock Guano, (Colombian.) The finest crop of wheat which is to be seen is from the use of this article.—The advantages are also to be seen on grass where it has been applied as a top-dressing."

To these testimonials we might add numerous others, but we deem it unnecessary. Evidences of its inestimable value are not confined to our own country—they are confirmed by agriculturists in England. Mr. Robert Bell, an eminent Merchant, of Liverpool, under date of May 15, 1857, states: "Respecting this article, Dr. Voelcker, Chemist of the Royal Agricultural College, having under his care 700 acres of land belonging to that Institution, remarks: "It becomes a matter of great public interest to promote the importation of a Guano (Colombian) calculated to excel it (the Peruvian) in practical use, and especially to landlords who would desire to encourage a system of cultivation at once immensely remunerative to the farmer, and permanently improving to the land."

LOCUST GROVE, *Frederick County, Md.*, June 13th, 1856.

MR. EDITORS:—At the solicitations of the Agent of the Philadelphia Guano Company of Baltimore, I propose to write to you upon the beneficial results of Mexican Guano. Last Fall I purchased eleven tons of Mexican Guano of the Agent of the Philadelphia Guano Company in Baltimore. A portion of which I used on my wheat crops, and the balance was used by several of my neighbors. I mixed about one-third part of Peruvian Guano with two-thirds Mexican, and applied about two hundred weight per acre; the result is, where it escaped the ravages of the fly, (which are very severe in this vicinity,) the appearance of a good crop.

On a field which I had in corn last summer and on which I sowed wheat last fall, I applied Mexican Guano mixed with Peruvian, in the proportion as stated above, except two acres, on one of which I applied two hundred weight of Peruvian Guano, and on the other I applied three hundred weight of A.A. Mexican Guano, leaving the space of two corn rows between; the result is, there is but a slight shade of difference, if any, in favor of the Peruvian Guano, though the expenditure of money was almost double in the part I applied the Peruvian Guano. As it regards the part that was used by my neighbors, they speak favorably of it; and I think it only remains for its productive qualities o be known. to render it a useful and beneficial fertilizer. Yours, with respect,

THOS. A. BAKER.

PRINCE GEORGE'S CO., MD., May, 1857.

To Wm. F. Murdoch, Esq.,
Agent of "Philadelphia Guano Co.," Baltimore:

This is to certify, that in the year 1856 I used on the same lands Peruvian, Manipulated and Colombian Guanos, for corn, and where the latter has been used, the yield has been one-third greater than where the others were applied in equal quanity. And where I have used same guanos on wheat, in equal quantities and on same quality of land, the wheat where I have used the Colombian, looks at this time by far the best. jy1 J. W. BROWN.

DRY GOODS, CARPETINGS, &c.

ROYSTON BROTHERS,

(SUCCESSORS TO ROYSTON & CO.,

81 BALTIMORE STREET, BETWEEN SOUTH AND GAY,

Keep constantly on hand a large stock of

HOUSE-KEEPING DRY GOODS; GENTS AND YOUTHS WEAR; LADIES' DRESS GOODS, in all their variety; LINEN HANDKERCHIEFS; HOSIERY; GLOVES; SHAWLS, &c.; HEAVY GOODS, for farm hands and servants.

CARPETS; OIL CLOTHS; MATTINGS; DRUGETS; RUGS, TABLE AND PIANO COVERS, &c. septl-1y

JESSE MARDEN,

INVENTOR AND MANUFACTURER

OF

RAILROAD, LIVESTOCK, HAY, COAL, DEPOT, WAREHOUSE,

and all other SCALES, that are now used, keeps constantly on hand a large assortment of every size, and makes to order at short notice, and warrants them to stand tests with any Scales that are forced in market on commission, and will sell at much less prices. The public are invited to send their orders, or call at my old stand, 59 South Charles street, corner of Balderston.

je1ly JESSE MARDEN.

Great Improvement in Threshing Machines.

WE are manufacturing 100 of the latest improved Railway Horse Powers, with Overshot Iron Cylinder Threshers, the shakers so arranged as not to take perceptibly from the power. Price of Two Horse Power and Thresher including band and fixtures for hulling clover-seed, complete, $140, one Horse Power $120. Also 5 sizes Hay Presses, from $75 to $100 each. All warranted. Please address W. W. DINGEE & Co., YORK, PENNSYLVANIA, and receive a circular.

mh1-1y

DRAINING TILE.

THE subscribers have constantly on hand any quantity of DRAINING TILE of the most approved patterns, which they will dispose of at the following prices:—1¼ inch bore $12 per thousand, about one foot bore each; 2¼ inch bore $15; 4 inch bore $35; Gutter Tile $20. They also keep constantly the best Sand Press Brick, $15, and Fine Brick, $25. Samples can be seen. Orders left at the office of American Farmer, or direct to the subscribers

RITTENHOUSE & CRAWFORD, Brick Makers,
W. Pratt St., near the Cattle Scales, Balt., Md.

☞ Southern Planter copy six months, and send bill to this office. jan 1

JOHN T. WATKINS,

Manufacturer and Dealer in

CABINET FURNITURE,

No. 47 SOUTH STREET, BALTIMORE,

☞ Has always on hand *SOFAS, CHAIRS, BEDS, BEDDING*, and in fact every article relating to House Keeping fo sale low for cash. septl-1y

SINCLAIR & CO'S

IMPLEMENT

AND

AGRICULTURAL MACHINERY,

OR FALL AND WINTER USE.

We are now manufacturing and offer for sale, a valuable stock of IMPLEMENTS and MACHINERY, which we warrant inferior to none in the United States. The best, and those most prominent, are as follows, viz :

Our

Patent Screw Propeller Straw & Hay Cutters,

We make of these unrivalled machines five sizes, price $20 to $45.

IRON AND STONE CORN MILLS.

Price, for most current sorts for Farm use, $50 to $110.

READING'S PATENT CORN SHELLERS,

Capacity 2,500 bushels per day. Price $55. Do. with Fanning Attachment, $65. Also various other patterns, for Hand and Horse Power, at $10 to 25.

HICKOCK'S PATENT CIDER MILL AND PRESS,

Recently much improved. Price $45.

FANNING MILLS, adapted for cleaning wheat, corn, oats or grass seeds—Price $28, 33 a $38.

COOPER'S LIME SPREADERS. Price $85.

PLOWS AND HARROWS.

We invite the attention of Farmers and Planters to our large assortment of PLOWS and HARROWS. The sorts and sizes are various, and adapted for every description of soil and cultivation. The following plows are most current and particularly recommended, viz :

PATUXENT PLOWS.

Size,	6	7	8	9	11	inch.
Price,	$4.50	5.00	6.00	7.00	9.00	

DAVIS AND IMPROVED DAVIS PLOWS.

Size,	6	7	8		10	inch.
Price,	$4.00	4.50	5.00	6.50	8.00	

MINOR AND HORTON PLOWS—7 sizes. Price $3.50 to $9.

IMPROVED BAR-SHEAR PLOWS, 6 to $15.

TWO and THREE FURROW GANG PLOWS, for seeding and cultivation. Price $5.50 and $6.50.

Also ten other patterns, adapted for heavy or light land.

20 sorts HARROWS, including the W and best pattern.

FOR SALE BY

R. SINCLAIR, JR. & CO.

62 Light Street, Baltimore.

sep1

FARMERS AND PLANTERS!

STUDY YOUR INTEREST.

LABORATORY OF ST. JOHN'S COLLEGE,
Annapolis, September, 1857.

Animal Compost, or Cereal Fertilizer.

ANALYSIS.

Volatile Elements, containing Ammonia and azotised compounds,	45.70
Salts of Soda,	02.29
Phosphate of Magnesia and Lime,	06.27
Volatile Compounds, carbonaceous,	22.87
Water,	15.70
Insoluble portion,	05.93
Error, or elements not estimated,	01.24
	100.

REMARKS.—The above must prove a very valuable fertilizer.

I have frequently recommended this compound as the best and cheapest manure for the light soils in certain districts of Maryland, that are deficient in organic material.

The manufacture of such substitute for expensive foreign manure, should be encouraged, especially when offered at less than one-fourth the price.

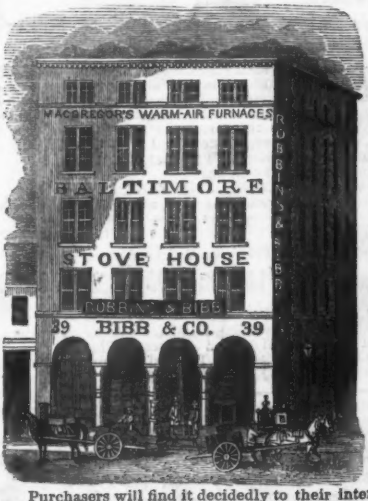
DAVID STEWART,
Chemist of Md. State Agricultural Society.

The above valuable ANIMAL COMPOST, OR CEREAL FERTILIZER, can be had of the Manufacturers,

KIMBERLY BROTHERS,
Corner Pratt and Patterson streets, Baltimore.

☞ **Price $12.50 in Bulk, or $15 including Package.** oct1-1y

BALTIMORE STOVE HOUSE.



Stoves, Hot-Air Furnaces, Fire-Place Stoves, Ranges, Cambooses, &c., &c.

OUR FRIENDS and the public generally are informed, that having largely increased our facilities, we are now prepared o supply promptly all articles in our line, *wholesale or retail*, at LOWEST CASH PRICES, or on usual credits to punctual customers. We name in part the following:—

FIRE-PLACE HOT-AIR STOVES—Five varieties, viz:—the Improved Feinour, McGregor, Augee's, Neer's, &c., &c.

HOT-AIR COOK STOVES—Twenty most approved kinds, viz:—Improved and Re-improved Old Dominion, Hercules, Troy Star, Welcome, Fulton, Globe, Maryland and Virginia.

HOT-AIR FURNACES—The celebrated McGregor, seven sizes, both portable and brick work.

RANGES—Six different kinds, viz:—Pond's Elevated Oven, Peirce's do. for wood or coal, (both of these are so arranged as to heat additional rooms above,) St. Nicholas, Mott's Invincible, &c.

PARLOR STOVES—Of all imaginable kinds and varieties, beautiful patterns, such as Radiators, Franklin's Grates, &c., &c. arranged to burn both hard and soft coals, as well as wood.

AGRICULTURAL BOILERS—Three kinds, the Newsham's, McGregor and Mott's, for wood or coal, holding from 10 gallons to 300.

SCOTT'S LITTLE GIANT CORN AND COB MILLS, Nos. 1, 2, 3 and 4—So favorably known and extensively used, are offered at *unprecedented low rates*, to close stock on hand.

We are prepared with a large force to PUT UP or REPAIR all the various articles appertaining to our line, whether sold by us or not.

Purchasers will find it decidedly to their interest to examine our large and well selected stock of first class wares before leaving their orders elsewhere.

BIBB & CO.
SUCCESSORS TO ROBBINS & BIBB,
AT THE OLD STAND, No. 39 LIGHT ST., BALTIMORE.

☞ Circulars and a List of Prices can be had on application as above sep1-6t

SPLENDID STOCK

OF

DRY GOODS.

HAMILTON EASTER & CO.

Invite the attention of persons visiting Baltimore, to the large and splendid stock of Goods in their

NEW MARBLE BUILDING,

Nos. 199, 201 and 203 Baltimore Street.

Importing the greater portion of our stock—one of the firm visiting the various European Markets twice a year, for that purpose—we are prepared to offer to WHOLESALE AND RETAIL PURCHASERS, goods of the best class at very low prices, including

Black and Colored Silks,

AND

ROBES,

FINE DRESS GOODS,

of every fabric,

LOW AND MEDIUM PRICED DRESS GOODS,

SHAWLS, SCARFS,

MANTILLAS AND CLOAKS,

GLOVES, HOSIERY,

CRAVATS,

HANDKERCHIEFS, &c.

Choice Goods for Men's Wear.

MOURNING GOODS,

of every description.

IRISH LINENS, LINEN GOODS, and articles of every description in the way of HOUSEKEEPING DRY GOODS.

☞ ALWAYS ON HAND, such Goods as are required by PLANTERS AND FARMERS, for SERVANTS' USE—such as Bleached and Brown Cottons, Osnaburgs, Jeans, Linseys, Plaids, Fulled Cloths, Sattinets, Blankets, &c.

No deviation from first price named for any article.

Wholesale Rooms on second and third Floors.

jy1-6t

PAGE'S IMPROVED

PATENT CIRCULAR SAW MILLS.

THE subscribers having greatly increased their establishment are prepared to execute all orders with promptness, and in the most workmanlike manner. They build three classes or sizes of their CELEBRATED CIRCULAR SAW MILLS, which have given so much satisfaction throughout the country—STEAM POWERS, of all kinds,—HORSE POWERS, GRIST MILLS, CORN AND COB CRUSHERS and various other Machines and Implements for economising labor.

Since their Portable Circular Saw Mills were invented by and patented to their senior partner, they have made many improvements, which render them perfect in all their details, and justly entitle them to be considered first among the labor-saving inventions of the age.

A pamphlet containing full descriptions of their *three classes of mills*, prices, terms, capacity for sawing, &c. will be sent to any gentleman applying for one by letter, post-paid.

Having recently obtained damages in an action for infringement of their patent rights, they warn the public against purchasing from unauthorized builders, or their Agents.

GEORGE PAGE & CO.

N. Schroeder, near W. Balt. St. Balt. Md.

ju 1-1 yr

LIME! LIME!! LIME!!

WE have constantly on hand, a large quantity of the best ALUM LIME, both slacked and unslacked, for Agricultural and Building purposes, which will be sold at the lowest rates. As we have sold our vessels, customers will give their orders to the Captains. All orders will be promptly attended and shipped as directed, by addressing

GRISCOM & BURROUGHS,

mar1-1y CITY BLOCK, BALTIMORE.

Hare's Patent Concentrated Blood Manure.

30 PER CENT. CHEAPER THAN PERUVIAN GUANO.

THIS powerful FERTILIZER, composed of highly concentrated animal matter and pure Phosphate of Lime, has proved itself after five years' fair competition in England, superior to the best Peruvian Guano. That its value is greater to the farmer, is certified by Dr. A. A. Hayes, State Assayer, Boston, and Professors James C. Booth and John Frazier, of Philadelphia.

Sold at $50 per net ton, by

JOHN L. MIFFLIN, *Sole Agent*,

jel-tf 139 SOUTH WHARVES, above Walnut-st., Phil

J. C. TURNER. C. F. YARDLEY.

TURNER & YARDLEY'S

PLANING MILL & LUMBER YARD,

No. 140 Light street Wharf, Baltimore.

Have constantly on hand and for sale at fair prices, a general assortment of 4-4 and 5-4 Dressed Flooring; 4-4, 6-4, and 8-4 Dressed White Pine, Dressed Stepping, and Weather-Boarding, Rough Lumber, Shingles and Laths. jy1-1y

LUTHER O. HARDING. WILLIAM HOPKINS.

HARDING & HOPKINS,

GROCERS AND COMMISSION MERCHANTS,

No. 2 Bowly's Wharf, 2d door from Pratt street,

Would respectfully call the attention of our friends and the public generally to our stock of Groceries, Liquors and Teas. Particular attention paid to weights of wheat and sales of all kinds of Country produce mh1-1y

PRINTING OF EVERY DESCRIPTION executed in the neatest manner, on reasonable terms, at this Office. Orders solicited.

Valuable Va. Land for Sale.

ON the Richmond and Danville Railroad, 35 miles from Richmond, containing 375 acres, 100 in original growth, 175 in pines, suitable building, fencing, &c., the balance arable, producing wheat, corn, oats and tobacco. The Dwelling is comfortable, with 4 rooms; the kitchen being the same size. Also, Ice House, Poultry Houses, Stables, Barns, Cribs, &c. The buildings are mostly new. I will sell the above farm for $10 per acre. Persons wishing further particulars can address

BARRETT A. WALTHALL,
oc1-tf *Amelia C.H., Va.*

TOBACCO FARM FOR SALE.

THE SUBSCRIBER offers for sale, **200 Acres** of land, seven miles from Annapolis, and within two hour's time by railroad of Baltimore and Washington. It lies between the railroad and the Severn river—bounded in part by the railroad on one side, and extending to navigable water on the other. It has a fine view of the beautiful sheet of water known as "Round Bay;" and is within five minutes walk of the Station and Post Office at Crownsville.

The land is of excellent quality and very productive—there is not an acre, probably, that will not produce clover luxuriantly. A portion of the soil is peculiarly adapted to the growth of fine tobacco, but it is sufficiently varied to suit well all the usual farm products. The convenience to markets, both by railroad and water, and the character of the soil for the purpose, would make this farm very valuable for growing for market all of the finer fruits.—There is now growing, and just coming into bearing, a small orchard of the best varieties of apples, peaches and pears.

The improvements consist of well framed houses, sufficient to cure some twenty hogsheads of tobacco; comfortable quarters for twelve or fifteen servants; corn house and other necessary out-houses, all built within a few years. There is no dwelling house. The place is remarkably healthy and abundantly watered.

Apply to Mr. Bryan on the farm, or the subscriber,

N. B. WORTHINGTON,
sep1 Office of Am. Farmer, Baltimore.
Annapolis and Upper Marlborough papers copy 3 times.

400 & 700 ACRES OF LAND FOR SALE,

LYING in Gloucester County, Va., containing, by recent survey, 700 acres: one-half is heavily timbered with Oak, Hickory, Ash, Pine, Chesnut, the balance cleared in a high state of productiveness, and well divided with chesnut rails. 300 acres is prime bottom land, 100 of which is cleared, and equal in productiveness to the best western lands. It is well watered, and has an inexhaustible supply of marl of the finest variety, and very accessible; most of the land has been marled, producing a marked improvement. The improvements are a large and comfortable brick dwelling, and all the necessary out buildings. Steamers run to Norfolk and Baltimore 5 times a week, with the option of the New York and Baltimore markets for produce. It is convenient to Court House, Churches, &c. It is an excellent location for a Saw Mill, (there is one in course of erection on the place). Lumber is in great demand, and commands high cash prices at the Mill. It is considered from its advantages of up and low land, fine water, and marl, society, &c., one of the most desirable estates in eastern Virginia. There are 150 acres in Wheat. Price $30.00 per acre. Terms accommodating. Possession given at any time.

Also 400 acres similar in all respects to the above tract—price $15 per acre. The tracts will be sold separate or together, as may be desired, or a further sub-division will be made.

Apply to MESSRS. SANDS & WORTHINGTON,
sep1-tf *Editors American Farmer, Balt.*

FOR SALE
IMPORTED HORSES AND CATTLE,

OF THE DIFFERENT BREEDS, with Royal South-Down Prize EWES, and others, recently imported.

Also, 18 SOUTH DOWN EWES, tupped by an Imported Ram; 12 Ewe Lambs of last spring, from same stock, with 5 very fine Ram Lambs—a few yearling South Down Rams—Also, Cotswold Rams and Ewes, reared in U. S.—and fine home raised HORSES with fine BROOD MARES now in foal. BULLS and COWS of different ages and breeds, with choice MILCH COWS and WORK OXEN. Improved HOGS of the various breeds. For particulars, address, MARTIN GOLDSBOROUGH, Gen'l. Agent,
no1-1t* No. 42 N. Calvert street.

FAIRFAX LAND FOR SALE.

WISHING to dispose of our land in Fairfax Co., Va., we will sell a great bargain to any person or persons wishing to locate in this beautiful and healthy part of Va. The land consists of two tracts lying adjoining, and on the county road from Centreville to Manassas Station, on the Orange and Alexandria R. R., 2½ miles from the former and 4 from the latter, containing respectively 183 and 250 acres of the red shell or slate soil, and is a part of that famous red vein of land so well known in New Jersey and Virginia. The 2 tracts could be conveniently divided in three tracts or advantageously farmed in one. The improvements are a good Dwelling House, Barn, Corn House, Ice House, Well of water in the yard, an Orchard of good fruit, Apples, Peaches, Pears, Cherries and Plums; the farms are under good fence, and greater part well taken in grass; wood and water abundant. For further particulars address Wm. P. Trott, Centreville P. O., Fairfax, Co., Va.

S. TROTT,
au1-tf WM. P. TROTT.

VALUABLE VIRGINIA FARM.

FOR SALE—Situated in *Gloucester County, at the mouth of Ware River, in full view of the Mob Jack and Chesapeake Bays.* It contains **283 Acres.** About 180 acres cleared arable land, in fine heart, and well adapted to Wheat, Corn, Oats and the Grasses. Vessels can lie within 100 yards of the shore. Buildings are all new, substantial and commodious. Fish, Oysters and Wild Fowl abound, and Seine hauling would be found profitable. Physicians consider the location very healthy, and the neighborhood and society unsurpassed, with places of Worship convenient, and Steamers for Norfolk and Baltimore twice a week.

Further particulars can be had on application to the Editors American Farmer, or on the premises to

JOHN P. TALIAFERRO.

☞Letters addressed to Gloucester C. H., Va., will be promptly attended to. feb 1-tf

A VALUABLE FARM FOR SALE.

A VALUABLE FARM of about 400 acres, in the Northern Neck of Virginia, is offered for sale, about 100 acres are heavily timbered with oak, hickory and chesnut. It abounds in springs of the purest water, in convenient to mills, navigation and landings and wharves for steamers to Baltimore, Norfolk and Alexandria. The neighborhood is good; the country remarkably healthy; the churches are Methodist, Baptist and Episcopal. The dwelling contains *fifteen* large well arranged and airy rooms. The location is a good one for a well conducted school, male or female, particularly of the Methodist or Baptist denomination. The stock, farm utensils, and furniture, if desired, would be sold with the farm. The terms can be made very accommodating. Address, THOMAS JONES, Jr.,
mar1-tf *Warsaw, Virginia.*

THE SUBSCRIBERS will sell at private sale a TRACT OF LAND containing about two hundred and ten Acres, about 3½ miles from the city of Annapolis, and very convenient of access from the Annapolis and Elkridge Railroad. The soil is of excellent quality, and susceptible of the highest degree of improvement. The terms will be made known upon application to the subscribers, residing near Millersville, and the premises will be shown by Mr. ESSEX R. DORSEY, or Mr. RICHARD D. SELLMAN, whose lands adjoin the same.

RAMSAY HODGES,
jel-tf MARY ANN HODGES.

INGERSOLL'S IMPROVED PORTABLE HAY PRESS.

We call attention to this *PRESS*, which *combines greater power and durability, requires less labor, occupies less space, and costs less money* than any other Machine for baling Hay or Cotton, ever offered to the public.

Also, FAIRBANK'S HAY AND CATTLE SCALES.

For Sale by J. A. WESTON & CO.
sep1-1y Sole Agents, 41 S. Charles-st., Baltimore.

LUMBER! LUMBER!!

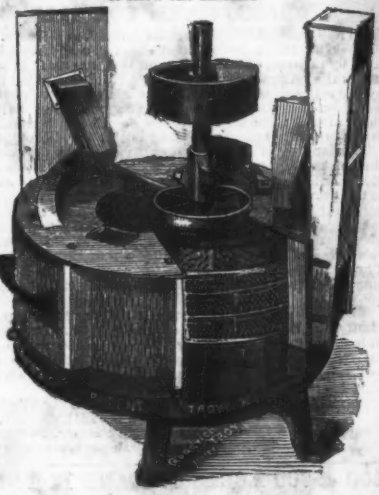
BURNS & SLOAN beg leave to inform farmers, their friends and customers that they will continue the LUMBER BUSINESS as heretofore at their old stand, corner of GERMAN and EUTAW STREETS, and also at 110 LIGHT STREET WHARF, at the yard lately occupied by Hugh McElderry, Esq. Our facilities being increased it will enable us to offer great inducements to buyers.

mh 1-1yr

LEONARD SMITH'S
LAST IMPROVED SMUT MACHINE.

PATENTED FEBRUARY 12th, 1850.

Representation of one-half of the Case thrown open to show the Interior.



The Patentee has been in the Smut Machine business for the last eleven years, and is well acquainted with all other Smut Machines in the U. S. and Canada, and from his long experience in the business, as well as being a practical miller of fourteen years experience, he is enabled to furnish the best Smut and Scouring Machine now in use.

WARRANTEE.—The machine will be sent to order, and warranted to excel all others now in use, in taking out smut and chaff, and scouring the fibres from one end of the berry and the germ the other and a trial of three months will be given from the day of shipment at Troy, N. Y.; and if the same does not operate as warranted, the machine will be taken back and no charge made for the use of the same, provided the same is put up and run according to directions and not injured or broken, and returned within three months from the date of shipment at Troy.

The subscriber has also for sale a Buckwheat Scourer, which is highly appreciated.

Baltimore, July 24th, 1857.

This is to certify, that I have now in use, in the Patapsco Mills, two of Smith's Smutters, and that I consider them equal, if not superior to any machine of the kind I have ever used. CHARLES A. GAMBRILL.

For Sale by

THOMAS NORRIS, Agent,
48 *Light Street, Baltimore.*

au1-6m.

GRAIN DRILLS! GRAIN DRILLS!!

I WOULD CALL THE ATTENTION OF FARMERS PARTICULARLY TO

BICKFORD & HUFFMAN'S
GRAIN DRILLS.

The GUANO ATTACHMENT to said Drill is, so far as my knowledge extends, the only efficient distributor of Guano in use. Having sold many of them several seasons past, and had the satisfaction to hear but one universal report of entire satisfaction from those that have used them.

I have, in former advertisements, warned those who wish to purchase a good Drill to give their orders early, in order to secure a good Drill: some of my customers say that this warning is a "*trick* of the trade," but some who were disappointed last year, have given their orders more than a month ago, as they felt the effect of not taking the warning last year; being compelled to purchase some other Drill, which is now to be laid aside as worthless, so far as the *guano* is concerned. Over three hundred have already been ordered up to this time from Baltimore alone. If orders are handed in early, farmers may be supplied with this excellent Drill; but there is no certainty, when seeding time has come. I say to all, order early or you may be disappointed. The Drill has proved itself to be just the thing, as hundreds are read to testify. Awaiting your orders for Drills, or any other Agricultural Implement or Machinery,

I remain the public's obedient servant,

THOMAS NORRIS,
No. 48 *Light Street, Balt.*

jy1

THE COMPLETE TRIUMPH

OF

"YOUNG AMERICA" IN 1857.

THE YOUNG AMERICA MILL

WAS AWARDED THE

GREAT FIRST PREMIUM

AT THE

UNITED STATES FAIR,

Held at Louisville, Ky., in September, 1857, and received the First Premiums throughout the whole Western country.

The continued success of this Mill, contrasted with the failure of all others, induce us to be confident in recommending it to our customers. It has proved to be of immense value to the farmer and planter. With the knowledge that the principles combined in this Mill are the only true and correct ones, for grinding corn and cob, we have this season greatly strengthened and otherwise improved the Mill, without any change of the principles.

The price is, as heretofore, $50, including AN EXTRA SET OF PLATES, making it equal to two complete Mills.

TRIAL OF CORN AND COB MILLS AT THE NORTH CAROLINA STATE FAIR, OCTOBER, 1856.

The following Table will show the Time occupied by each of the Mills on Exhibition, in Grinding half bushel of Corn and Cobs:

YOUNG AMERICA, 2 Minutes and 40 Seconds.
LITTLE GIANT, 4 " 55 "
MAGIC MILL, 6 "
SINCLAIR & CO'S MILL, 2 Trials, average time, 6 Minutes, 58 Seconds.

E. WHITMAN & CO.

dec.1 **63 Exchange Place, Baltimore, Md.**

BANDEL'S

PURE SEED

WYANDOTTE

PROLIFIC CORN!

WORTH MILLIONS TO THE COUNTRY.

Its Success Triumphantly Established.

Producing Twice as much per Acre as the Common Varieties now Cultivated.

Plant only One Grain in a Hill, 4 to 5 feet apart, product from 3 to 8 (and often more) stalks, and 6 to 12 ears of pearl white corn, 8 to 15 inches long, and 10 to 14 rows on the ear.

YIELD OF FODDER IMMENSE.

Another year of triumphant success in growing this extraordinary cereal, enables me to offer it with increased confidence to the Agricultural community, believing that only one trial is sufficient to convince the most incredulous mind of its great value as a crop corn, and a variety that MUST AND WILL soon supersede all other kinds grown. My Circulars, descriptive, &c. of the Corn, and also containing certificates of those who have cultivated it, and notices from the Press, is now ready and will be mailed to all that request it.

The seed will be carefully selected and put up in packages to suit, and marked "Bandel's Pure Seed of Wyandotte Corn," containing also directions for cultivating.

PRICES.—One quart, which is sufficient to plant one acre, $1.50.

Those who order it to be sent by mail, and remit $4, will receive (postage paid) sufficient to plant one acre; $2 a half acre; $1 a quarter acre.

☞Persons wishing to act as Agents, will be supplied at reduced rates.

☞Money or Postage Stamps must accompany the order.

☞ORDER EARLY, as many were disappointed in not securing a supply the last season.

Address,

GEORGE S. BANDEL,

BALTIMORE, MD.

☞The following agents have been appointed, at whose places of business, in Baltimore, specimens of the Corn can be seen and pure seed obtained at the above rates:

Sands & Worthington, office of American Farmer.
E. Whitman, Exchange Place.
R. Sinclair, Jr. & Co. Light Street.
James B. Streets, Commission Merchant, No. 10 Bowly's Wharf.
C. H. Tschudy, Paca street, near Franklin.
Geo. W. McNeal, Cor. Buchanan's Wharf & Pratt-st.

dec1-4t

[*From the Detroit Daily Advertiser, Oct.* 31, 1857.]

IMPORTANT VERDICT.—The Case of PAGE vs TERRY, to which we referred in our last issue, is one of more than ordinary interest, as it involves the exclusive control of all the circular Saw Mills used for sawing lumber from ordinary saw logs throughout the United States.

The plaintiff claims that all Circular Saws used for that purpose, which have guides near the edge in combination with end play to its shaft are controlled by his patent, and that no one has any right to use them without a license from him.

The defence was put on the grounds:

1st. That from the drawings and specifications in the plaintiff's patent the mills could not be constructed.

2d. That the patent was useless, as better lumber could be made without the plaintiff's improvements.

3d. That there had been no infringement by defendant.

The trial lasted a fortnight, and was closely litigated in every point.

The verdict was in favor of the plaintiff on all the issues, thereby giving him the complete control of that class of mills. There are many thousands of them in operation, and the demand for them is daily increasing. The charge of the Court was in favor of plaintiff on nearly every legal questton which arose in the case, and was substantially the same as Judge McLean on the first trial. dec1-2t

A NEW ANIMAL FOR FARMERS!

THE subscriber has the satisfaction to announce to the farmers of the United States, that he expects to receive, shortly, as consignee for the owners, about one hundred and fifty LLAMAS, which at last dates had reached Panama, from Equador and Peru. These animals are believed to be well adapted to the use of the farmers of this country; they are hardy, docile, capable of much labor, require a very small amount of sustenance, and no water where the herbage is good. They are also believed to be as profitable an animal as any now kept upon the farm; the work which they can perform scarcely equaling the profit from the production of the wool or hair which constitute the fabric of the well-known Alpaca. Due notice will be given of their arrival, and orders for them addressed to the undersigned, will be carefully attended to. Any further information will be communicated to applicants.

ISAAC LOHMANN,
No. 142 *Front Street, New York.*

dec1-2t

CITY IRON RAILING MANUFACTORY,

No. 374 WEST BALTIMORE STREET,

Baltimore, Md.

I am Manufacturing WROUGHT & CAST IRON RAILING of every description; also, BED STEADS, TREE BOXES, TABLES, CHAIRS, SETTEES, RAIN SPOUTS, CELLAR WINDOW FRAMES, &c.

M. M. EGE, AGENT,
Successor to Newsham & Co.

dec1-1y

PAGE'S PERPETUAL DRAW LIME KILN, adapted for either WOOD or COAL, and will burn 100 bushels of Lime with one cord of wood, or 150 bushels with one ton of Bituminous Coal, the quality of the Lime being equal to the best wood burnt Lime. These kilns save fifty per cent. in labor, and the fires may be extinguished and started again at pleasure. Individual or county rights for sale, (except Baltimore and Frederick counties,) and full descriptions given on application to the undersigned, agents for the owners of the patent.

THOMPSON & OUDESLUYS,
No. 57 South Gay street, Baltimore.

Who keep constantly on hand English Roman Cement; American Rosendale ditto; Cast Iron Glazed Clay and Wrought Iron Plain and Galvanised Water Pipes, and Pumps; Baltimore Company's Shovels and Spades; Composition Lead Pipe (English) Sheet Iron; Founders Facings; Pig Iron; Wilders' Patent Salamander Iron Safes, &c., &c.

nov1-6t

WANTED—CARPENTERS AND BUILDERS TO know that they can purchase at No. 67 Pratt Street, 3d door from Bowly's Wharf, Sash, Glazed and Unglazed, Doors and Blinds, Window and Door Frames, Mouldings, &c., cheaper than at any other house in the city of Baltimore. Call and see for yourself. Farmers will find that they can save from 10 to 15 per cent. by purchasing of me.

PHILIP T. DAWSON,
Agent for the Trenton Steam Works.

oct1-1y*

AMERICAN FARMER.

VOL. XIII. BALTIMORE, JANUARY, 1858. No. 7.

WORK FOR THE MONTH.

JANUARY.

At the commencement of the new year, permit us in all sincerity to tender you with the compliments of the season, and to express the hope, from the deepest well-springs of our hearts, that your days may be blessed with health, happiness, and prosperity, that your fields may prove fruitful, crops abundant, and remunerating prices reward your labors; for if there be one class of society that more than any other deserves to be thus compensated, it is the tillers of the earth.

With this tender of our compliments, our hopes, and our aspirations, permit us to remind you that it behooves all engaged in our noble calling, to come to the firm determination, to so carry on our operations throughout the year, as not to lose any time that ought to be devoted to the occupations of our farms, in order that our exertions may tell in their results, not only in abundant crops, but in the improvement of our lands. Hence, then, it is befitting us all, before we commence the committing our seeds to the soil, to be sure that the ground has been thoroughly and well prepared; for, of a truth, thorough preparation and generous manuring, are the two foundation stones of successful farming; superadded to which, we must all see that no crop requiring cleansing shall be neglected in working, and that it be worked at the proper time.

In marking out your year's cropping, look well to the force and the means that you have to work with. Don't overcrop yourself; for so sure as you do so, the result will be, that much will be left half done, or perhaps altogether neglected, in the cultivation. Strain every nerve, use every available means within your power, to manure every acre that you may cultivate, that requires nourishment.—Upon this point, make up your minds to these truths: Every plant cultivated by husbandmen requires to be fed; that an acre well manured, well ploughed, and properly cultivated, will produce more than two acres whose wants have not been thus attended to, and that your true interest consists in confining your culture to that which you can do justice by, as well in manuring, preparation of the ground, as in tending the growing crops. You may rely upon it, that no more corn, or other row-crops, should be put in, than can be generously manured and cleanly cultivated; *nutriment* and *cleanliness* being the essential elements of product.

With the expression of these opinions, we turn to the duty of pointing out, briefly, a few of the many things that should claim attention on the farm during the month.

Winter Ploughing.

There are many periods during winter, when, from the mildness of the weather, ploughing may be done. Therefore, if you have any stiff, clayey land, that you desire to put in crops next spring, you should seize all such favorable seasons to get it broke up. By exposure to frosts, when broken up, such lands, *if ploughed in the right state*, become greatly improved, and lose much of their tenacity of character, are more easily cultivated, less expensive to till, besides being rendered better adapted to the production of crops. But this amelioration in texture can only be expected, when the soil, at the time of its being ploughed *is neither too wet* nor too dry. All, especially strong loams and clays, should be ploughed in the *medium state*, between wet and dry, or when they are comparatively *mellow, slightly moist, and least cohesive*. When clayey soils are perfectly dry, they are so hard and rebellious, as to be unconquerable by the plough; and when decidedly wet, they are so sticky and plastic, as to be workable by ploughing only into masses of plaster, with innumerable receptacles for water, utterly incapable of subsequent pulverization, and certain to settle into hard clods, on which no farm crop can grow. The furrows should be made to lap at an angle of about 45°, so as to expose the greatest surface to the action of the frost. Thus, if you plough 6 inches deep, the furrow should be 9 inches wide; if the depth of the furrow be 8 inches, then the furrow should be 12 inches wide. In the spring, when the ground is dry enough to bear the team, without danger of being injured by poaching, it should be rolled, and then harrowed with a heavy two or three-horse harrow, until the soil be as thoroughly pulverized, as from its nature it is susceptible. We go in for thorough tilth; for as perfect sub-division of the particles of soil as possible, and for deep ploughing, having no fears about a few inches of "poison-till."

Surface Drains.

Careful hands should be made to go through the fields in winter-grain, examine the surface-drains carefully, and remove all obstructions to the passage of the water. This duty should be repeated every few weeks during winter and early spring, so as to prevent any accumulations of water upon the young plants, as the settling of water upon them during frost, exerts the most injurious influence upon

in time
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case.

In connection with injuries resulting from freezing out, we will remark, that stiff lands, if properly drained, ploughed deeply, thoroughly pulverized, water-drained, and the drains, at short intervals, attended to, would not *winter-kill* one-tenth part of the winter grain that they now do. A deep dry bed, is the most sovereign cure for such disease, if it can be so called, that can be prescribed.

WORKING ANIMALS.

These, of every kind, should be treated with care and attention. Warm, well ventilated stables, good fare regularly dispensed to them thrice a day, well littered stables, currying and rubbing down morning and night, and water three times a day, are great promoters of health; and at no season of the year is such treatment and care more needed than this, when the poor creatures have to perform their labors amidst every degree of inclement weather.

Two ounces of salt ought to be given them thrice a week, or the same quantity of a mixture of equal portions of salt, ashes and *slaked* lime; oyster shell lime the best kind for the purpose.

FENCING.

If you have not already felled and got out stuff for posts and rails, have this work promptly done, and have the materials hauled to the barn, to be worked up into fencing, by the hands, in bad weather.

FIRE WOOD.

If you have not already completed your supply of fire wood, have it done promptly, before the roads become almost impassable. When hauled in, have it piled up ready for use.

GATES.

We repeat our former advice. Have every pair of bars on your place replaced by a light, substantial gate.

MILCH COWS.

These should have warm stables, or tight, dry sheds, and receive generous feeding and kind treatment. Water them thrice a day, and salt them thrice a week.

IN-CALF COWS, AND HEIFERS.

Feed these moderately well, give them dry, warm shedding, water them thrice a day, and salt them thrice a week.

BREEDING MARES.

These should be fed moderately liberal, and receive such food as is good and nourishing. They should be so fed as to keep their stomachs at peace, and to preserve their muscular integrity. Pregnant animals should not be kept fat, still they should be fed upon such nutritious food, and in such quantities, as will keep them in good condition. The feeder should recollect that the young ones within require support as well as their mothers; the foals have bones to be formed, flesh to be elaborated, and fat to secrete, and that these cannot be formed unless their dams receive the materials out of which they can be made. Good dry sheds and yards, are also necessary to the comfort and health of these animals.

MATERIALS FOR MAKING MANURE.

Collect everything on your place that may be convertible into manure, haul it to your barn-yard and spread it thereon, or form it into compost heaps.

CARTS, WAGONS, TOOLS, IMPLEMENTS.

Examine these, and have such of them as need it, repaired, and if not needed for use, have them put under cover.

DITCHING AND DRAINING.

Wet lands should be laid dry, by ditches and drains.

SLEIGHS.

Get these ready for the accommodation of the ladies of your families. If needed, have them repaired, and give them a coat of paint.

YOUNG COLTS AND CATTLE.

Give to each of this species of stock, separate yards, with warm sheds, and feed them so as to keep them in good growing condition. To *stint* young stock of their food, is to *stunt* them of their growth. Good hay and moderate feeds of grain, are indispensable to the growth of young stock of all kinds.

SHEEP.

Attend to these as we have so often advised.

GRAIN FOR FEEDING,

Should always be chopped or ground. By such preparation, fully one-fourth the grain may be economised, while it will be more healthful for the animals.

SELLING CORN.

Sell your corn *shelled*, and have the cobs crushed or ground for your stock.

CORN AND COB CRUSHER.

If you have not one, get one at once. It will save its price in *one* season, and last *many*, if well used.

CORN SHELLERS.

Every farmer should have a good corn sheller, either to go by hand, or horse power.

BREEDING SOWS.

Provide these with warm, dry sleeping apartments, give them good bedding, and renew it often. Each breeding sow should have a separate apartment to herself, and be moderately well fed.

STORE PIGS.

Let their food be sufficiently generous, to keep them always in a growing condition: a hog, to be profitable, should never be so fed as to be arrested in his growth, by a system of half starvation.

GEARING.

Clean and grease your gearing once a month.

MARL.

If you have marl, and fields that need it, apply it this winter.

POULTRY.

Feed these moderately well; alternate their food, supply them with gravel, old mortar and sand, or ashes, to roll in. If you wish to encourage their laying in winter, give them fresh meat, chopped up, thrice a week.

WORK IN THE GARDEN.

JANUARY.

There is not much work in the garden this month; but however little there may be, it should be attended to, and it shall now be our duty to point that little out.

Clayey Beds.—If there be any stiff, clayey beds in your garden, you should seize the occasion of any warm spells of weather through the winter, when the ground may not be frozen, nor too wet or too dry, to have them dug up. First give the beds a good dressing of strong manure, spade it up a full

spade in depth; when dug, leave the beds in the rough, and give them a top-dressing of ashes.

Hot Beds.—If your garden is not provided with hot beds, in which to grow plants for early transplantation, it is time to get them ready, as such appliances are indispensable to the successful growth of early vegetables, to grow which, should be an object with every provident owner of a farm.

If the procurement of frames with glass lights, should be considered objectionable, upon the score of expense, the glass can be very advantageously substituted by cotton cloth, which, when oiled, will be found to be a very excellent conductor of light and heat.

For most families, a hot bed frame of 10 or 12 feet long, the width of the border, (which should face the South,) will be found of sufficient dimensions to grow all the early plants needed, and such a frame can be made by any person that can nail planks together; but should glass lights be needed, the expense will not be heavy. The back of the frame should be *twice the height of the front;* the front about 5 feet high. A few inches space should be left behind the back, for insertion of horse dung, to raise the heat. A top or cover must be made, to stretch the cotton cloth cover over, to be attached by hinges, for the convenience of being raised up and lowered down, to give air to the plants and regulate the heat. The cotton, when tacked on, must be oiled. The best boards to make the frame out of, is yellow pine, about 1½ inch in thickness.

Mode of making the Hot Bed.—A hot bed can either be formed on the surface, or by sinking the frame a few inches; the former we think the most eligible plan.

The dung should be horse dung, which should be turned over, shaken, and well mixed with a dung fork, as it is being put in on the bed; every now and again, beat it down with the back of your fork: continue this process until the dung is about 4 feet in depth in the frame, when the dung must be left to settle down 6 or 7 inches, which it will do in 8 or 10 days. When the dung is in, put down the cover to raise the heat. When the heat is sufficiently raised, put 4 or 5 inches of dry earth or mould on top of the dung, level and rake it, and your hot bed will be ready for sowing the seeds of any kind of vegetables you may desire to grow.

The space behind the frame must be filled with horse dung.

Time of Sowing the Seed.—Most plants after the seeds are sown, are ready to set out in from 6 to 8 weeks. Keeping this fact in mind, those who have hot beds, can very readily regulate the time of sowing their different kinds of seeds; marking the time when, in their *respective localities*, plants may be safely set out in the open ground, govern as to the time of sowing the seeds. As an *average* of time, it would be safest to allow 6 weeks for the growth of the plants.

Management of the Bed.—On every good day in mild weather, after the plants are up, the sash should be raised, a few hours in mid-day, a few inches high, to admit air and graduate heat. In bad, cold weather, the bed should be covered with matting.

Corn Spoiling.—Many of our farmers have ascertained that much of the corn they stowed away this fall has spoilt in the bulk. This is doubtless solely due to the fact that the corn crop was much later making than usual, and was not sufficiently dry when housed.—*Charlottesville (Va.) Advocate*

COLOMBIAN GUANO.

To the Editors of the American Farmer:

In the December No. of your journal, Dr. Piggot has done me the honor to review my little article on the "Rock Guano of the Caribbean Sea Islands," which appeared in the number for November; some portions of which he has evidently glanced over very hastily, as he has misunderstood my meaning. Having the highest opinion of Dr. Piggot's analytical skill, and knowing the experience which he has had in the examination of guanoes, I differed from him principally in regard to a chemico-geological question. But, unfortunately, he seems to have appropriated some of my remarks, which were generally made, to have a special application to himself; for instance, he writes: "Mr. Taylor enters also into a defence of the use of the new phosphates in agriculture, and says he does not see why they should be condemned. *I never condemned them.*" I would not make such a charge against Dr. Piggot's scientific acquirements, as to suppose him capable of condemning, untried, substances which it is reasonable to suppose, will soon be clearly demonstrated, (by practice) to be valuable in agriculture.

Dr. Piggot does not seem to have noticed the progressive substitution in the phosphates, as shown by the specimens from Centinella. The ash from the recent bird excrement, is in composition very near that of the Guano rock from Los Monges Islands; the excrement converted into rock beneath the cliffs, varies a little, there being a slight substitution of the phosphates of lime, by alumina; in the main rock of the islands, the substitution has progressed farther.

Any positive theory as to the formation of the Rock Guano, cannot be made until the Islands have been fully explored, the phenomena carefully noted, and the sea water of that locality analyzed. The sea water in the vicinity of some volcanoes has been found to contain sulphate of alumina; very possibly that of the Caribbean Sea also contains it. Sea water has also determinable quantities of proto-carbonate of iron in solution, (according to Bischof,) and the consequent action of these substances upon the phosphates of lime of the bird excrement, may produce wavellite and vivianite, which being hydrated minerals, are evidently formed by water.

The phosphate of iron, which is so abundant as Vivianite and rare as Dufrenite, is doubtless formed by the reaction of the sulphate or carbonate of iron with the phosphate of lime of the entombed fossils. The instances of the substitution of bases taking place among phosphates, are not so rare as Dr. Piggot supposes; and it will, I am sure, need only a request through your journal, to the gentleman reading it, to observe in the marshes, where the formation of bog iron ore is in constant progress, in which bones of animals may have been entombed—which, by the action of the carbonate of iron in the soil, are converted into phosphates of iron. In some instances the appearance of the bones may be but little changed, with the exception of slight blue spots, but by breaking, crystals of Vivianite will probably be found in the interior. There is a remarkable instance of the occurrence of Vivianite, in the Calamine mine of Scharley, in Silesia; a skeleton of a man was found, in which the mass of the bone was converted into this mineral. Phosphates of copper and phosphates of lead are frequently found at the surfaces of metallic

lodes, in the neighborhood of fissures, which clearly show that the water containing the phosphates, (probably phosphate of lime) was derived from the phosphate of the rock, or from the organic remains in it. Bischof farther records instances of tertiary fossils converted into Vivianite; I have also in my cabinet, specimens of Vivianite in the form of belemites. Many other instances might be recorded, did space permit.

I am surprised that Dr. Piggot should think that I disregard geological cycles; the time in which the formations and decompositions have occurred in, cannot be conjectured with any great degree of certainty, until our information is greater. I subjoin an extract from my Investigation, which is a compendium of the most reliable information which could be obtained from those visiting the Islands: "The islands of the Caribbean Sea are very varied; some are quite low, and covered with sand, composed of fragments of shells, madrepore and corals, which can readily be distinguished with a pocket lens. These are resorted to by myriads of water fowl, for laying their eggs. . . . Other islands attain heights of 800 feet; it seems improbable that such heights could be created by accretions of guano and sand, when the islands are subject to a continued action of the waves of the ocean. The inclination and irregularity of the guano layers, renders it not improbable, that the dynamic causes which produced this distortion, elevated at the same time the islands." "These islands are in a volcanic region, being within 150 miles of Guadaloupe."

Dr. Piggot objects to my remarks as to the sources of phosphoric acid, and even questions the high authority of Bischof, that in all probability, the phosphoric acid which now exists in minerals, has most probably circulated in the organisms of plants and animals. In the October number of your journal, the interesting and scientific communication of Hon. T. G. Clemson, on "Microscopic Organisms," illustrates in a beautiful manner this economy of nature; the extract contained in it, from the valuable work of Mr. Elie de Braumont, traces in such a masterly manner the reasons which I have given from Bischof, that it will be only necessary for me to refer your readers to "Microscopic Organisms," which I think will convince them that this subject may well receive the special attention of political economists. Phosphoric acid is doubtless coeval with the world; it exists in the basaltic rocks and lavas, which are of all ages, from which it has circulated in the vegetation on their surfaces, or formed one of the principal components of minerals; by means of water saturated with carbonic acid, these were in their turn decomposed, the phosphoric acid passing into plant organisms, and from thence into animal organisms, forming one of the chief constituents of bones. By the decay of organised substances, it again returns to the mineral state, and furnishes material for the formation of phosphates, such as Vivianite.

With regard to the mineralogical characteristics (which practically are not important,) I am obliged to adhere to my original opinion, notwithstanding that Dr. Piggot thinks otherwise, and I am satisfied to submit the specimens, on which my conclusions are based, to the judgment of the eminent mineralogists, Profs. Dana and Brush, of New Haven, and Dr. F. A. Genth, of Philadelphia.

Respectfully yours, J. W. TAYLOR.

Worcester Co., Dec. 11th, 1857.

DR. BALDWIN'S THEORY.

To the Editors of the American Farmer:

I observed in the December No. of the American Farmer, a few remarks of the senior editor of that journal, under the head of "Application of Manure to the Soil," which prove that he has totally mis-apprehended my views in relation to agricultural science. So far from claiming credit for original views in relation to the application of manure to the surface, (as he supposes) I have been zealously endeavoring to prove to the farmer, that he may successfully dispense with the use of manure altogether. From the high character and acknowledged ability of the senior editor of that journal, I presume that this strange misconception must have arisen from the circumstance that the subject has been so recently "pressed upon his attention." If the senior editor will do me the favor to publish my propositions in his journal, as he finds them in the "Plough, Loom and Anvil," published in October, 1850, by Mr. Skinner, and thus bring the subject fairly before his readers, I can assure the senior editor that he need not refrain, out of "respect to my feelings," from correcting my erroneous opinions, or from justly rebuking any vain assumptions of originality of ideas, which he may suppose they contain.

Respectfully, R. T. BALDWIN.

[We give the above, with the remark, that the subject *has* been "*pressed upon our attention*," in an anomalous manner, recently, though if we remember aright, it has on several previous occasions been attempted to be urged upon us by Dr. B., or others who seemed to be peculiarly interested in drawing public attention to it; but the idea that the farmer "may successfully dispense with the use of manure altogether," was so inconsistent with reason, in our view of the subject, we must admit, (with all due deference to the Dr.) that we deemed it unnecessary to renew attention to it in our pages. We, however, publish the following, from an anonymous correspondent, who, although signing himself an "old friend" and well wisher, has not thought proper to give us his real name. From this communication, the Dr's theory may, perhaps, be apprehended by the reader, as we have not the volume at hand to which Dr. B. refers.—ED.]

To the Editors of the American Farmer:

In the December No. of your most interesting and valuable journal, you say: "With regard to surface manuring, the property of ownership does not belong to Dr. Baldwin; it was started in England more than a century ago," &c., &c.

I have for many years been a careful observer of Dr. Baldwin's theory of improving the science (if it may so be called) of agriculture, and must confess my great surprise at your view of that theory. I understand Dr. Baldwin's views to be: That nothing constitutes the aliment of vegetable life but that which has directly or indirectly passed into the putrefactive process; or in his own words, the residue of putrefaction—that if you put a plant in an exhausted soil, nothing in the form of carbonates, phosphates, sulphates, &c., &c., will make that plant grow; and that nothing but manure will effect that object—and that nothing but that which

has passed into the putrefactive process is manure. This position being assumed—and as far as my experience and observation goes, it is impregnable—the Dr. then goes on to say, that he finds that where the surface of the earth is covered in such a way, as would promote the putrefactive process in other cases—that the surface of the earth becomes so changed as to be eminently fertile, and to an extent almost incredible; and *from his first proposition* he *infers*—and I think legitimately—that the surface of the earth itself undergoes the putrefactive process; the difference in the appearance of the surface soil before it was covered, and that after, showing plainly that it has undergone a *chemical* change. Hence Dr. Baldwin's discovery is: that the surface of the earth itself undergoes, *where it is covered*, the putrefactive process. He uses the word "shaded;" I think covered is better; but there is no use in disputing about terms.

This, if it be true, and I do not doubt it, constitutes, as was said by the venerable Editor of the Plough, Loom and Anvil, an epoch in agriculture. And this is unquestionably a discovery; for old as I am, I have never heard of that position ever having been taken by any man, either in the books or out of the books.

Of course Dr. Baldwin would use manures on the surface, because he not only gets the benefit of the manure as an *aliment*, but he also gets the benefit of the same article as a *covering* substance, starting and continuing the putrefactive process on the surface which it overlays.

On page 203 of your December number, you publish some experiments, from an Edinburg journal, which go to sustain the Dr's theory.

There is certainly great simplicity and beauty in this theory of Dr. Baldwin's. It gives *one* mode of sustaining and promoting vegetable life. All organic substances die, and more or less pass into the putrefactive process; but they return again, and vivify the earth. Nature never works but by *one* law, to produce *the same result*. Let us try to find what that law is in the great chemical laboratory of Nature; and the farmer will no longer be bandied about like a trap-ball, by every *new* chemical experiment.

YOUR OLD FRIEND & WELL WISHER.

Henrico County, Va.

MOLASSES FROM THE "MITCHELL" APPLE.—With the following note, we received a sample of the molasses or syrup alluded to; the taste of which so nearly resembles that of the Chinese Sugar Cane, that we would not have hesitated to pronounce it the same:

BELLEVOIR, Dec. 15th, 1857.

To the Editors of the American Farmer:

GENTLEMEN:—The numerous experiments made the past fall on the "Chinese Sugar Cane," induced Mr. John Mace, of this county, to test the properties of *cider*, made from the Mitchell Apple, a variety peculiar to this (Dorchester) county. I send you a sample of the *syrup;* it retains somewhat the flavour of the fruit, and is both rich and pleasant.

The yield was, if anything, greater than that from the "Sorgho," having from three gallons of cider, made rather more more than three quarts of syrup. The sample sent, he says, might be greatly improved, as the cider was made early in the season, and a considerable portion of the fruit unsound. I do not know that the experiment will be of any practical benefit, but may induce others to carry it further.

Yours truly, R. T. GOLDSBOROUGH.

NEW OXFORDSHIRE SHEEP.

A correspondent of the Country Gentleman, Mr. Jno. M. Larmouth, of Oneida county, N. Y. thus speaks of this valuable breed of sheep:—

"The raising of fine wool has long been, here, unprofitable, and while considering what stock I would substitute, I noticed occasionally articles in the Cultivator from those who had recently purchased the sheep called the New Oxfordshire, describing them as just the variety I wanted. I had never seen them, but relying on the representations of them, at last determined to venture on a small purchase, and ordered from John T. Andrew, Esq., of West Cornwall, Ct., a pair of New Oxfordshire lambs. In due time they reached me in good order, and gave me an agreeable surprise. My highest expectations were more than realized. I had seen beautiful animals at our fairs, and noticed the sheep particularly, but had never seen anything approaching the appearance of these beautiful animals. They were only seven months old, and weighed two hundred and fifty-five pounds. They had great square forms, short limbs, set wide apart, long, white, silky wool, small bones, fine little heads, large prominent eyes; and most intelligent countenances. They were perfectly gentle, would not roam, and loved to be petted. With ordinary care they grew rapidly through the winter, and on the 11th of April the ewe lamb, not then a year old, surprised me with a fine male lamb.

"About the first of June my two lambs were shorn, and yielded twenty-one pounds of clean and beautiful wool, about a foot long, a specimen of which I send enclosed. At the shearing, my buck, a year old, weighed 168 lbs. The infant lamb, eight weeks old, weighed 48 lbs.

"On the 21st of August they were weighed again. The yearling buck weighed 190 lbs.; the nursing yearling ewe weighed 130 lbs., and their baby, four months and nine days old, weighed 100 lbs.!

"In the month of September I was obliged to shut them up at night on account of dogs, and they lost weight—the buck 20 lbs., and the lamb 10 lbs. While attending the fairs they gained nothing.—They now have their liberty, and are gaining finely. On the last of October last, they weighed, notwithstanding their confinement, the yearling buck 190 lbs., the ewe 160 lbs., and the little one 125 lbs.!

"I exhibited my lambs at our County fair, and also at the fair of Jefferson County. They took prizes at both. They have a great many visitors, who pronounce them the finest they ever saw. I am fully satisfied with them, and intend to procure an addition to my flock. They are so large, hardy, prolific, and as objects of taste, so ornamental, that they must prove profitable."

LARGE PORKERS.—Mr. W. B. Hamilton, of Sweet Air, Baltimore county, has slaughtered two Chester hogs, about two years old, one of which weighed 444 lbs., the other 542 lbs. Wm. Pole, Esq., late Sheriff of same county, slaughtered three hogs, less than a year old, which weighed 815 lbs. Mr. John Diffenderffer, of Winchester, Va., slaughtered two hogs, 16 months old, one of which weighed 475½, and the other 412½ lbs.

PREMIUM ESSAY,

TO WHICH WAS AWARDED THE PREMIUM BY THE UNION AGRICULTURAL SOCIETY OF VIRGINIA AND NORTH CAROLINA.

ROTATION OF CROPS,

EMBRACING THE CULTURE OF TOBACCO.

BY EDWIN W. FRIEND, DINWIDDIE.

From the colonial times to the present day, the tobacco crop has been regarded as more exhausting than any other, not only by monopolizing all the manure collected on the land, but requiring annual clearings of virgin soil for its profitable culture. These clearings, after yielding two or three crops, and parting with much of their fertility, were subsequently often impoverished by the continued cultivation of grain, through a series of years, without any restorative process. But notwithstanding these facts, the aggregate area of land devoted to this important staple is probably as extensive now as at any former period. Nor can we anticipate that its limits will be materially reduced for many years to come. Occasionally, when the market is depressed, other crops are partially substituted; but whenever a reaction takes place the culture is resumed, so that the supply is never inadequate to the demand for more than two or three consecutive years. As a general fact, in all that portion of Virginia adapted to tobacco, it is the most profitable crop to which the cultivator can direct his attention. Exacting as it is in its demands on the labor and resources of the planter, it yields more ready money than any other product; and for this reason there is no probability that the cultivation will ever be abandoned.

It becomes then an enquiry of the highest importance, whether tobacco is necessarily an exhausting crop? For if it is to continue, as heretofore, under improvident management, to desolate some of the fairest portions of the State, every friend of agricultural progress would be justified in setting his face against it, and endeavoring to strike it off from the list of its products. But if a system can be devised for its continued and even increased cultivation, not incompatible with the progressive agricultural improvement of the country, it will be productive of results of no inconsiderable magnitude. The culture might then be pursued, not only without any anxious forebodings on the part of the proprietors of the tobacco region as it now exists, but it might be advantageously resumed in many parts of the country in which it has long ceased.

The writer of this Essay ventures to submit the following system of a rotation of crops, including tobacco, the result of much reflection and experience, in the confident belief that the object which every judicious cultivator of the soil should always have in view—namely, the certain if not rapid improvement of his land—is entirely practicable.—His own success fully warrants him in recommending this system to all those—and they constitute the most numerous class—who combine the occupations of farming and planting. For those whose main occupation is planting, the system may perhaps be not so well adapted; but even in their case he would suggest its adoption to a greater or less extent, according to their respective circumstances.

Taking then a farm, which we will suppose to be in a condition not above that of the average lands of the country, I would recommend that it should be divided into six fields as nearly equal in size as convenience will permit. And here it is important to remark, that the size of the farm and the number of laborers employed in its cultivation, should relatively bear a definite proportion, the one to the other. It is generally admitted that, with the necessary attention to other crops, each hand can cultivate 7,000 hills of tobacco. Assuming then the number of laborers to be five, there will be 35,000 hills of tobacco, which, at the usual distance, will be equivalent to about 8½ acres. This estimate will give 17 acres to the field, or a little more than 100 acres of arable land as the proper size of a farm to be worked by five hands. If the numerical force is greater, the size of the fields should be proportionately increased. It is true that farmers may, and often do, extend their operations over a wider surface in regard to their force; but as the cultivation is necessarily less perfect it is believed that the results obtained will not justify the practice. In every course of tillage intended for improvement as well as profit, the culture should be thorough. The rotation, then, on the six-shift system, will be as follows—the course of culture in a single field being given as an example of the whole.

First year—CORN, to be manured from the resources of the farm as far as they will go.

Second year—OATS. Immediately after the oats are removed, one half of the field is to be sowed in peas, with 100 lbs. guano to the acre, on the part designed for tobacco the ensuing year, the vines to be turned under in the fall.

Third year—The half field of peas after oats, which is to be put in tobacco this year, should be thrown up in 3½ feet beds during the winter or early spring, and the furrows half filled with straw or woods' litter. If lime or ashes can be obtained, the land should have a dressing of one or the other during the winter: and just before the plants are large enough for transplanting, an application should be made of one bushel of salt, a bushel of plaster, and 200 lbs. Peruvian guano per acre, immediately on the beds and litter. The beds are then to be reversed, and the plants set out as soon as there is a season. It is preferable to confine the straw to the furrows instead of spreading it broadcast on the land. The soil will be rendered less porous, and no obstruction will be offered to the hoes at the time of the first weeding. It will also be in a position to afford to the plant all the nutriment that can be derived from it while undergoing the process of decay. There will be sufficient depth of soil over the straw for setting the plants, without running any risk of having a bad stand. The salt is intended to keep the cut worms out of the straw, and it doubtless has some influence in retaining moisture in the soil. But it is used chiefly on account of the worms, the number of which would otherwise be greatly multiplied. It will effectually prevent their ravages.

The other half of the tobacco field is to be sowed in peas from the 15th of May till the 1st of June, with 100 lbs. of guano per acre, preparatory to seeding the whole field in wheat in the fall.

Fourth year—WHEAT, with 100 lbs. of guano per acre.

Fifth year—PEAS. The land should have been plowed the preceding winter, and is to be sowed in peas by or before the 1st of June, and 100 lbs.

of guano to be applied per acre. To get the full value of the pea crop, the seeding should not be postponed later than the time designated. After oats or wheat, late seeding is of course unavoidable, though the crop is still very valuable; but when it is practicable to give it the benefit of a whole season's growth, early seeding is greatly to be preferred. The plant comes to more perfect maturity, and the vines are prolific of fruit, furnishing the best food for hogs intended to be fattened and yielding an abundance of seed for future use.

Sixth year—WHEAT, after the pea fallow. If practicable, as soon as possible after the wheat is harvested, the field should be laid down in peas, with 100 lbs. of guano to the acre, for the benefit of the crop of corn the next or 7th year, when the second rotation commences.

It will thus be perceived that peas are regarded as an important, and indeed indispensible auxiliary in the amelioration of the soil during the first rotation. The frequent seeding to which it is necessary to have recourse, in order to derive the greatest benefit from the vines, doubtless involves a considerable amount of labor, but it is labor that is amply recompensed in the increased productiveness of the grain crops. All labor and expense that can be usefully applied, no farmer should hesitate to bestow upon his land; indeed necessity compels it before success can be achieved.—And the same amount of improvement cannot be so cheaply purchased in the early stages of rotation by any other means as by peas and guano. During the second rotation, if proper diligence has been used in the accumulation of manures from the resources of the farm, the land will be in a condition to produce clover. But until this point is gained, whether sooner or later, the pea cannot be dispensed with; and at all times it is profitable to continue its use as an intervening green fallow, when two crops are grown on the same field in two consecutive years—as between the oats and tobacco in the 2d and 3rd years of the rotation, and between the wheat and corn in the 6th and 7th years.

The practical working of this system of rotation is as follows: one field in corn, one in oats, the half of one field in tobacco, two in wheat, and one and a half in clover or peas. The oats and corn, being fed on the premises, may be considered as returning to the soil a large portion of what they have abstracted from it. The area, therefore, occupied by the market crops, is only two and a half fields, or five-twelfths of the whole surface. Under any other conditions than those which have been indicated, this might be regarded as rather an oppressive system of culture; but by strictly adhering to the principles on which it is based, and carrying them out with energy and fidelity, the recuperative powers of the soil will be developed, and the value of the system fully vindicated. Experience justifies me in stating that it is a highly ameliorating course, and that at the end of the third rotation the land will have attained its maximum fertility.

It may not be improper here to remark—though it will doubtless have occurred to the reader—that after the completion of the first rotation, the alternate halves of the fields are to be planted in tobacco. It will thus be only once in twelve years that any particular portion of the land will be cultivated in this crop—a period so extended that no exhausting effects can be apprehended from it.

But whether tobacco be cultivated or not, the six-shift system is believed to possess intrinsic merits which entitle it to pre-eminence over any other rotation, whether regard be had to the permanent improvement of the soil or the aggregate products of the farm. It is more particularly applicable to this region of country, which is not naturally adapted to the vigorous growth of the cultivated grasses, but which yields abundant crops of grain under judicious management.

The improvement of the soil, however, may be still more rapidly promoted, and its fertility perpetuated, in those localities—as for example in the neighborhood of cities, and on navigable streams or railroads—where lime or ashes may be had at a reasonable cost of transportation. In light and sandy soils especially, their liberal application induces a luxuriant growth of clover sooner than animal or vegetable manures, and they secure a higher degree of fertility in a shorter period of time. Varying the details of the system I have recommended, by adapting it to these circumstances, and omitting the tobacco crop altogether, the following has been my course of cultivation:

First year—CORN.

Second year—OATS. As soon as the oats are harvested they are to be succeeded by a crop of peas, with 100 lbs. of guano to the acre, the land being well prepared; the pea vines to be turned under, in the fall, for wheat; and the wheat to be manured, either from the resources of the farm, or by the application of 100 lbs. of guano, with a peck of plaster and a bushel of salt.

Third year—WHEAT. In the latter part of winter or early in the spring, the field is to be sowed in clover at the rate of six quarts per acre.

Fourth year—CLOVER, top-dressed in the spring with any material that will shade the land and afford nutriment to the clover. Wheat straw is very valuable for this purpose, and coarse manure cannot be applied in a more economical manner. The land to be fallowed in July or August for wheat.

Fifth year—WHEAT.

Sixth year—VOLUNTEER CLOVER, to be pastured during the summer and fall, and fallowed in the winter for corn. It is only one year during the rotation that any field is allowed to be grazed, and this is the period I prefer. But every farm should have the benefit of a standing pasture. It will obviate the necessity of excessive grazing in case of drought, and relieve the land from being poached in wet weather, while the soil will be sufficiently trodden by the hoof to prevent it from becoming spongy.

To carry out this or any other systematic course of improvement, the farmer is required to make as great an amount of manure as the force on his farm, and the available materials it will supply, will admit of. When guano or any other manure is to be applied to fallowed land for wheat, it should be put on at the time of seeding, and worked in with the harrow, or trowel hoe, with the seed. But in the case of a pea fallow it is preferable to apply one half of the guano to the peas at the time of sowing, and the other half to the wheat—say 200 lbs. in all—adding always a peck of plaster and half a bushel of salt at the time of seeding the wheat.

The intervention of a crop of peas between the oats and wheat is regarded as of great importance

and by no means to be omitted. All grain crops feed mainly on the same materials, and the pea vines supply in a large measure what has been abstracted by the oats. They derive much of their nourishment from the atmosphere and the subsoil, and return to the soil considerably more than they draw from it. Clover is sometimes uncertain—though less so where the land has been limed or ashed—but peas constitute a never failing resource. Their value can scarcely be too highly estimated.

While the rotation above described is recommended as combining a greater number of advantages than any other that has come under the observation of the writer, and as being particularly adapted to the southern and eastern portions of Virginia, yet almost any system, if faithfully carried out, is preferable to the absence of all system which prevails so extensively among us. What we need, more than any thing else, is systematic farming; and there can be none deserving the name that is not founded on a fixed rotation. Rotation and improvement are correlative terms: the latter cannot be carried on without the former.—They must proceed together, or no steady progress in agriculture can be effected. The writer is aware that, since the introduction of guano, and also in the neighborhood of cities where large quantities of fertilizing materials may be collected, a systematic culture has not been deemed essential. There have not been wanting ardent and enthusiastic, though perhaps inexperienced farmers, who have advocated the doctrine that the same land may be cultivated for a series of years with continually increasing crops. Under a system of high pressure it may be admitted that this is practicable. But these conditions do not apply to the country at large. With only the ordinary means of improvement at command, however industriously they may be applied, there is no land capable of resisting the ruinous effects of continual cropping. The free use of ameliorating crops is absolutely necessary. The only contingency in which a departure from a fixed rotation can be justified—if it can be justified at all—is when some particular crop happens to be in unusual demand on account of previous years of failure, and the prices consequently above the average range.—To meet the demand for wheat for the last two or three years, the product has been greatly augmented, not only by the increased breadth of land which has been given to its culture, but by the excessive use of guano; while the most extraordinary exertions have been made to extend the tobacco crop the present year. It may be doubted, however, whether in the end the farmer receives a full compensation in the enhanced price of the crop for the excessive draft on his land. Be this as it may, the practice should only form the exception and not the rule. There should, at least, be no infringment on the established routine except in seasons of extraordinary scarcity and corresponding demand.

DINWIDDIE Co., VA., *October*, '57.

☞ *A. G. Christian*, Esq., of Mint Spring, has kindly consented to receive subscriptions and dues for the American Farmer, in Augusta Co., Va., and vicinity.

P. Johnston, Esq., of Richmond, has the bills for Richmond and vicinity. All persons indebted to us in Virginia, can settle with Mr. Johnston.

ADDRESS OF GEN. GEO. W. HUGHES,

DELIVERED BEFORE THE CHARLES CO. (MD) AGRICULTURAL SOCIETY AT ITS ANNUAL EXHIBITION ON 11TH NOV. 1857.

We have read with much interest, this address, published in the Port Tobacco Times, and had laid it off for publication entire in our pages—but its length precludes our doing so, at the present time, and therefore must content ourselves with the following extracts. After showing the intimate connexion between the art and science of agriculture, the Orator proceeds to show the slow progress made in the implements and general system of husbandry, until science came to their relief. In alluding to the attempts now making to introduce the steam engine to supercede the plow, he speaks doubtfully of its success for reasons assigned. The advantages of draining are then discussed, and his remarks upon this important subject we copy entire, and fully accord with the conclusions at which he has arrived, and although we have repeatedly urged the subject upon the attention of our readers, yet we think it cannot be too often presented for their adoption, and we are pleased to have this additional aid from a source so well calculated to command attention. He says:—

"The necessity of freeing lands from a superabundance of water must have been apparent in the early practice of agriculture. The first drains were, no doubt, as they are generally to this day, open ditches or land furrows, more or less deep: but the ancients, to some extent, resorted to subdrains, constructed of stone, wood, or, in some cases, of tile, the remains of which may still be found. In 1841 I saw in Devonshire, cylindrical tile of coarse kaolin, which had been employed by the Romans for that purpose during their occupation of England, but their use on a large scale and as a regular system is of very modern introduction, and although eminently successful, has, so far been mainly confined to Great Britain and Ireland, owing probably to the large expenditure of money it involves, *when the work is well done*, for when imperfectly, it is a useless waste of labor and materials. It has been found, however, to be the best investment of capital that the landed proprietor can make. It is a bank that never fails and drafts upon it are never dishonored.

It is now received as an axiom in England that *all* lands, except those immediately underlaid by deep beds of sand or gravel, are improved by subdrainage—the level clay lands and marshes the most. It was an old practice in some parts of France to perforate the soil, when practicable, to the sand or gravel, and to lead the water to the wells in open ditches, where it was rapidly absorbed. I have successfully resorted to this plan, under favorable circumstances, to avoid culverts under high embankments, where there were no running streams to encounter.

Amongst the advantages to be derived from a deep and thorough system of tile draining, as practiced in Great Britain, are claimed to be a drier and more friable soil, that resist drought better

than in its natural state, by drawing up water from the subsoil by capillary attraction—a better aeration and more efficient action of manures by the percolation of water downwards after rains—a more rapid growth of plants and consequently a greater immunity from blight and the ravages of insects, and more hardihood in resisting the action of frosts—less liability to wash and loss of fertilizing matter—an entire fitness for cultivation in the spring and after heavy rains, and at all times a much higher under-ground or *bottom* temperature—a great desideratum, as every gardener knows. If these facts be well established, as they certainly seem to be, there can be no doubt entertained of the great importance of the question.—That they are truths may be inferred from the almost universality of the practice in one of the most intelligent and best cultivated countries in the world; and where the good sense shown in the conduct of private affairs has passed into a proverb.

There is another fact well worthy of consideration in connection with sub-drainage. Mr. De Lubergne—late Professor in the Agricultural Institute of France—says: "The climate itself gains sensibly by it. The health of the inhabitants is improved; and in all parts where drainage has been vigorously carried out the mists of the foggy isle (Great Britain) seem less thick and heavy. Drainage was first thought of ten years ago, and now [1848] more than two millions of acres at least are already drained: everything promises that in ten years almost the whole of England will be so. It is as if the island were once more rising out of the sea."

But it is contended that however profitable it may be to resort to sub-drainage in England it cannot be so necessary in the United States, owing to the difference in climate. To some extent this may be so, but I am inclined to doubt the truth of the conclusion. To be sure we have more bright days than in England, but the annual quantity of rain that falls with us is greater than in that country; and where that system has been fairly tried in the New World its results have been not less marked and favorable than in the old.

A few years ago, being in western New York, I visited a farm where the first experiment of draining with earthen tile had been tried, in the United States, as a regular system, and where it has still continued in active operation. It was my purpose to examine the process in detail and to judge of its effects from personal observation. To my mind they were perfectly satisfactory. The farm to which I refer is situated on the eastern slope of Seneca Top and elevated several hundred feet above its level. The soil is a rich friable loam, naturally well adapted to the growth of corn, wheat and clover. To my untutored judgment but little of it required draining of any kind—a few open ditches would have cleared it from surplus water. The proprietor informed me that he first drained six acres—a portion of a 20-acre lot, which had rarely brought a good crop of wheat or clover, owing to winter killing. He planted in corn, and, with the usual cultivation, made from the drained portion 83 bushels of corn to the acre. The next year it was cropped in barley, the drained land "producing the finest plant and best yield of grain." This induced him to drain the remainder of the lot at a cost of $22 per acre. It was again sowed in barley and followed with clover: He says of the latter—"I cut a very large crop, and not a square foot of it froze out, and now I can rely upon a good crop of anything I sow or plant." Speaking of another lot of forty acres, subsequently drained, he continues—"This year I harvested from this field a crop of wheat, and a heavier crop I never saw to stand up. Heretofore, many acres of wheat were lost on the *upland* by freezing out, and none would grow on the low lands. Now there is no loss from that cause; only two small patches were lodged, in all less than a quarter of an acre; in fact, the whole field was so even that it was difficult to pronounce any five acres worse [or better] than the rest. This wheat also seemed to stand fly better than in the surrounding fields. In 1855, the time of my visit, the owner, a plain hard working farmer, had laid fifty miles of such drains. In his prize essay on this subject he says—"My first efforts were made in 1835, when I imported a pattern of drain tiles from Scotland and caused them to be made in this neighborhood by hand." It is to this gentleman, Mr. John Johnstone, an intelligent foreigner, that we are mainly indebted for the introduction into this country of this important agricultural improvement, who brought with him from his native land the skill and knowledge necessary for its successful application—one of the many advantages in science and the practical arts which we derive from immigration. I trust that in these observations I shall not be understood as speaking in a party sense—for nothing can be farther from my intentions. They are simply sentiments which I have frequently expressed years before they could possibly have borne any such signification: and they are now naturally suggested by the subject under consideration. It is well, gentlemen, that there are occasions like the present,—would to Heaven they were more frequent,—when laying aside, for a time, political differences, we can all stand on a common platform and feel that we are engaged in a common cause—in the useful, the great, the noble cause of Agriculture, which in all history has embraced in its ranks the most distinguished of poets, orators, heroes, and statesmen. There can be none more important, or more worthy of the best efforts of the patriot and the philanthropist, for in its broad and solid foundations rests the whole structure of civilized society and national and personal prosperity. We live at best too much in the excitement of party strife. It has become almost our daily occupation. It is a fell spirit that obtrudes his miscreant front everywhere—in the judgment seat and the jury box—in the chair of the learned professor, and in the sacred desk of the minister of God; and even the hallowed retirements of social life are not free from his presence. From this place at least we can banish him.

But to resume our subject. Other farmers in New York have followed Mr. Johnstone's example. The Transactions of the New York Agricultural Society, for 1852, contains a prize essay from Mr. Yeoman on tile draining. He commenced in 1849; and describes his land as mostly a loam with a slight mixture of sand and gravel, from 15 to 18 inches deep, resting upon a hard pan nearly impervious to water, and which had to be broken up by a pickaxe to lay the drains. The land is elevated and lies in a rolling and sloping position, so much he remarks, "that my draining operations have caused nearly all who beheld them to wonder that I should incur so great an expense in draining lands

which (as they thought) were already dry enough." As it regards the expense, he observes, "I will only estimate the increased value of the lands by saying that I have the last year drained 20 acres at a cost of $25 per acre; and that I should not permit such lands to remain without such draining even were the expense doubled." We may form some idea of the extent to which this practice is now carried in New York by the fact that there are in that State three large establishments—at Geneva, Waterloo, Albany, and perhaps others elsewhere, busily engaged in making drain tiles.—I was glad to learn that a large invoice of them had been shipped from Geneva to Virginia, but could not learn to what particular locality.

I shall say nothing in this connection of the details of tile draining, as the time to which I must limit myself would not be sufficient for that purpose. They can be learned elsewhere. My sole object is to earnestly call your attention to its importance. One word as to the principle on which this system acts and I am done with this branch of our subject. "Take this flower pot," said the President of a French Agricultural Society, "What is the meaning of this small hole in the bottom? To renew the water. And why to renew the water? Because it gives life or death to the plant. *Life* when it is only made to pass through the bed of earth, for it leaves with the soil its productive principle, and renders soluble the nutritious properties destined to nourish the plant. *Death*, on the other hand, when it remains in the pot, for it soon becomes putrid and rots the roots, and also prevents fresh water from penetrating." "The theory of drainage is exactly described in this figure."

Another subject too much neglected in our own and other Southern States, we are pleased to see Gen. Hughes urging so strenuously upon the attention of the farmer and planter, that of Horticulture and the cultivation of Fruits:—

"There is another subject too much neglected, that forcibly commends itself to the consideration of the Maryland farmer. I refer to an increased interest in horticulture and the cultivation of fruits. I arrange them under one head, as they may be profitably combined and require but little extra labor. Nature in the successive ripening of fruits and melons—from the strawberry, the water melon and the cantaleup, to the peach, the apple and the pear, has pointed out a healthy and pleasing change of regimen particularly adapted to our warm and long protracted summers. In hot weather but little meat should be consumed and our food mainly confined to vegetable diet. In the whole range of the pharmacopœia there is probably no remedy so efficacious for dyspepsia and diseases of the liver as ripe grapes. This is so well understood in France that it is called the "grape cure;" and the suffering invalid looks forward with bright anticipations of returning health to the season of their fruition. The climate and soil of Maryland are well suited to the cultivation of grapes, and *perhaps*, to the production of wines. Much attention has been paid, for several years, to the manufacturing of wines, in some of the Southern and Western States, from native grapes; and that branch of industry has been well rewarded. They undoubtedly produce a true and sound wine, and many connoisseurs affect to rank them with the best of Rhenish and French wines, to which they are assimilated; but in my uncultivated taste I confess to a decided preference for "old Madeira, Johannerburg," and real "Champagne."

The moral aspect of the question—the growing of wholesome native wines, is however, well worthy of serious consideration. The extensive production and use of light wines is well calculated to check the fearful progress of intemperance amongst us; for it is a well established fact that the natives of wine producing Provinces are less addicted to that vice than those of non-producing countries.

The evils of intemperance have been greatly aggravated by the recent use of deadly poisons in the process of distilling and manufacturing factitious spirituous liquors. It is stated that, owing to this cause, *delirium tremens* is a much more common, and far more unmanagable disease than formerly: and it is said that very pure whiskey or brandy cannot now be obtained. If this be so it will do more for the cause of temperance than all the Maine laws that could be enacted, or than the moral suasion of all the "teetotal" societies in existence. It was difficult to persuade a man that there was any great evil in a glass of "old Monongahela"—nor perhaps was there if used in moderation. A bishop of the English Church was once asked "if a *certain* quantity of spirits would do a man any harm?" "No," was the reply, "it is the *uncertain* quantity that does the mischief." But in these days one should hesitate before taking even a *certain quantity* unless he carries with him an antidote for the strychnine in the cup. Thus, in the end, good may come out of evil."

Upon the subject of the trials endured by the farmer in our State engaged in the culture of wheat, which he fears will have to be abandoned therein, and some other crop substituted in its place, "should the seasons continue for a number of years as unfavorable as the two last has been," he adds:—

"The principle causes of injury to our staple productions have resulted from severe winters, dry, cold and backward-springs, and the ravages of the fly and army worm. The causes are, apparently, beyond human control, but, if the two last, as I believe, are mainly dependent on climate, then the primary evil may be somewhat mitigated by the system of drainage to which I have adverted. I have long thought that we are every year alike liable to the visitation of these destructive insects, and that the injuries they inflicted were owing to the peculiarity of the seasons. One thing is certain: the severest winters do not destroy the ova of the Hessian fly; and their appearance in the autumn is not always followed by serious consequences to the crop. Should the plant not be thrown out by freezing and thawing, and should the early spring prove propitious to its rapid and vigorous growth, there is but little danger to be apprehended from the presence of the fly. I assume that the fly makes its appearance and deposits its egg *every* fall and spring; but that under *favorable circumstances* the plant outgrows its efforts to destroy: and the same may said of the army worm. Close, moist, hot weather, such as we had in the beginning of last June, will be sure to develope its myriad hosts. Such at least has been the result of my experience for many years past. If the premises be correct, then a thorough system of drainage, by which the "throwing out" of the wheat

is avoided and its growth quickened by a warmer and drier soil, places to some considerable extent the remedy in our own hands."

We do not anticipate the results feared by the speaker. The climate of our State, is probably less subject to fluctuation than that of most others on this continent—and we must have a hopeful trust to Providence, that in future our fields will be blessed with their former fertility.

In connexion with this branch of his subject he refers to another evil, which he thinks greater than those he has just alluded to—"*The Bears* who frequent the corn exchanges of our commercial cities"—He says:—

"The greatest curse to the farmer is the speculator in breadstuffs, who sells largely on time, perhaps not a bushel of grain or barrel of flour for actual delivery, and then sets to work, by the moving power of money, the commercial press to lower prices. The farmer may reconize in ravaged fields and the blight of teeming harvests, the dispensations of an All-wise Providence—who overrules everything for good—perhaps as a punishment for sins committed or duties unperformed, but it sorely tries his patience and forbearance to be told, in contradiction to the evidences of his senses, that he has made large crops, and that therefore *low prices must rule*—until he has sold the meagre fruits of his toil, and then, *presto!* there is a marvellous change in the tune, and it is suddenly discovered that the crops were short the last season.

Early in each year, long before even a shrewd Yankee could possibly *guess* the probabilities of the harvest, the same cuckoo note is heard of the great promise of the wheat fields—the crops of the *present* year will far exceed those of any previous years—prices must come down; and appeals are made to farmers to hasten their grain to market."

After giving sundry statistics showing the effects of these operations of speculators upon the interests of the farmer, Gen. Hughes says:—

"I have long believed that the only probable remedy for this condition of things would be found in the establishment of an Agricultural Department of the Federal Government with a Cabinet Minister at its head, and a sufficient staff of subordinates to collect from time to time, in conjunction with State and County Societies, reliable information of the annual breadth of wheat seeded, the prospects of the growing crops, and an approximate estimate of the yield of the harvests. This may not prove a *perfect* corrective of the abuses complained of: but it would go far to prevent their recurrence. Had such a department been in existence when the *Reciprocity* Treaty was negotiated—a scheme to plunder the agricultural for the benefit of other industrial classes—it would probably not have been consummated. I do not wish to be understood by these remarks as being opposed to the *principle of free trade*; but let them be of universal application and not to the farmer alone, who has to pay taxes on almost everything he buys, while there is *practically* no protection for the productions of *his* capital and labor.

I am aware that serious doubts are entertained in many quarters as to the constitutional powers of Congress to authorize the establishment of an Agricultural Bureau or Department. It may be sufficient, however, to say on this head that if Congress possesses the power to attach, for agricultural purposes, a Bureau to a Bureau of an Executive Department—to send agents abroad to collect plants and seeds—to pay others for chemical analyses, and to report on the habits of insects injurious to vegetation, and to spend money on the printing of agricultural papers, (all very useful expenditures,) it must needs have the right to do the same thing by direct legislation and by a more perfect machinery than it now employs. To continue matters as they now are is a mere trifling with the *great interest* of the country. The business should be well done or not done at all."

MR. RIVES' ADDRESS.

In a former No. we noticed, from an exchange, the eloquent address of *Alex. Rives*, Esq. of Albemarle co., Va., delivered before the Agricultural Society of Greenbriar Co. We have since received a copy of the Address, which we have read with much gratification, and design making some extracts from it hereafter, but must content ourselves with giving the following eloquent and appropriate peroration of the address, at this time:—

"We have abundant reason, Mr. President, to felicitate ourselves upon the charms of our rural life and its occupations. Not the least of these is the home it secures; the comfort it provides; the tastes it nurtures; the charities it calls forth, and the sweet activities it engages for the best portion of God's creatures. Their presence on this, as on similar occasions, attests their sensibility to this truth, and bespeaks their sympathy in our aims and labors. At the altars of our rural homes and within the sanctuary of their domestic duties, do they seem like what they have been termed, "the mysterious priestesses, in whose hand is the invisible Jacob's ladder, by which man may mount into very Heaven."

Scarcely less to be prized, is its freedom from temptation and vices; the training it gives to the affections; the habitual reliance it teaches on Providence; and the submission it exacts to the will of God. It cherishes no immoderate love of gain nor thirst for sudden wealth; it enforces economy; it nurtures independence; and its prayer is that of Agur—"give me neither poverty nor riches; feed me with food convenient for me; lest I be full and deny thee and say who is the Lord? or lest I be poor and steal, and take the name of my God in vain." The farmer no more than others can hope to be exempt from casualties and disappointments, he learns to support his misfortunes with resignation; and without repining at evils he could not foresee, or losses he cannot repair, he accepts the Poet's consolation and assurance, that

> "Nature, a mother kind alike to all
> Still grants her bliss at Labor's earnest call,
> With food as well the peasant is supplied,
> On Idra's cliff as Arno's shelvy side,
> And through the rocky-crested summits flown
> These rocks, by custom, turned to beds of down."

"The capitalist, without this dependence upon God and His seasons, and with his heart cankered by sordid dealings with man alone may perchance find a sullen satisfaction in calculating his interest for each moment of his existence; but how much

purer and more devout the joy and thankfulness that expand the heart of the farmer, as he catches from his pillow sounds of falling rain, like "songs in the night"—the grateful voice of the clouds "dropping fatness" on his well-tilled crops; or else as in his daily rounds, he welcomes the increase or watches the growth of the flocks and herds with which God repays his care! Still higher emotions attend his meditations. He feels the consciousness of living in the very bosom of Nature and investigating her sublime laws. The deeper he penetrates into her mysteries, the stronger is his impression of the wonderful order and symmetry that pervade all her operations. The moralist weeps over the painful spectacle of misery and disorder which man's passions and rebellion against reason, entail upon society, but the student of Nature, rejoices over the harmony that reigns in all her laws. Her workings are but types of our own being; in her plastic hand, matter is ever assuming new and wonderful forms; and it is these mysterious changes or creations, that fill our thoughts with awe and devotion, and strengthen our religious Faith and Hopes. The same sentiment is beautifully displayed by the Holy Scriptures in the apt use of the ordinary but mysterious phenomena of vegetation, as illustrations of the change and life, to which we are destined. Thus, by the course of natural observation and reflection, the contemplative husbandman, is led from "*Nature up to Nature's God*," and, whatever may be the trials he meets, he is soothed by the tranquil scenes, amid which he moves; his views are elevated by the great teachings of Nature and Revelation, and he delights to cultivate that humble confidence in the ways of God, which secures his equanimity here, and sustains his hopes for the future.

"But, Mr. President, I do not indulge this strain of remark for the idle purpose of raising peans of praise to our art. I have a higher object. It is to elevate our conception of its dignity, and make us act worthily of its great responsibilities. It is to inspire us with a wise love of our calling, acquaint us with its obligations, and impart to us its proper sentiments. We have need to raise our standard higher, and point its followers to a more arduous and glorious career. We have to supplant ignorance, by knowledge; prejudice, by reason; error by truth. In such a mission we need something more than the countenance, the support, the encouragement of man alone. In conclusion, therefore, I propose with you, Mr. President and Gentlemen, to supplicate the all-wise disposer of human affairs to indue the farmers of Virginia with that measure of wisdom and liberality, energy and piety, which shall enable them to discern their true interests, maintain their rights, fulfil all their duties, bear their crosses, and "run with patience, the race that is set before them."

THE NEW GUANO ISLANDS IN THE PACIFIC. Commander Davis, of the U. States ship St. Mary's writes that the "conclusions and opinions" of Commodore Marvine, respecting the Guano or New Nantucket Island in the Pacific have been approved by the actual observations of himself and other officers of the St. Mary's, who, being there at a favorable season, were enabled to land at that island. Com. Marvine, it will be remembered, pronounced as worthless whatever guano might be found on the Island, in consequence of its being saturated by heavy rains.

A KENTUCKY FARMER.

Our friend McJilton, of the Baltimore Patriot, paid a visit last fall to Lexington, Ky., during the week of their agricultural fair, very graphic descriptions of which he gave in letters to the Patriot. The following letter giving a brief sketch of the farm and stock of Mr. Van Meter, with whom he was sojourning, was intended for our last number, but was crowded out. It will be read with interest.

SINKING SPRINGS,
Near Lexington, Ky., Sept. 12—P. M.

I stated in a former letter that I was the guest of Isaac C. Van Meter, Esq., some five miles from Lexington, on the Versailles pike. I am still here, and here I should be willing to stay if my business did not compel me to leave. This forenoon I mounted one of his spirited nags and accompanied Mr. V. over his estate—some 700 acres of superior land. We were joined by Rev. Sam'l M. Bayless, a Presbyterian Minister, formerly of Harford county, Md. Mr. B. has resided in this section of Kentucky, for several years, where he married a most estimable lady, Miss Milton, who are now members of Mr. Van Meter's family. This farm is composed of two tracts, and is as fine a quality of lime-stone land as can be found in this part of Kentucky—considered the "garden spot of America." Our trio first rode through a portion of the cultivated fields, and then into the pasture grounds; these are the wood lands, but very different from any in the East. The wood is of white oak, ash of three varieties, walnut, hickory, burr oak, locust, coffee nut, buckeye, sycamore, &c., with no undergrowth. These wood lands are set in blue grass, which grows to an height, to me, really surprising, and which remains green and growing all through the winter. These are the pasture grounds of the cattle, in which they luxuriate in all seasons—fed only with other food while the snow covers the grass, which is usually of short duration in the winters here. I will hereafter speak of the machine and mode of gathering the seed of this grass, if I do not forget it.

The first herd we came across were eighteen yearling heifers, with a few cows turned out for beef. These yearlings were all calved on this farm, and of the full short horn Durham stock.—Many of them would compare favorably with those who took the blue badge at the Fair. I will say here that Mr. V. did not enter any stock at the Fair, for he has so many silver cups already that he is not anxious for any more. Many a good draught of rich milk I have had out of these silver goblets. We then proceeded about half a mile to the pasture where a part of his fat cattle were browsing This was a small herd, as the principal number of this kind of stock are fed on other farms at some distance off, on one of which are 310 head, and on another 140. These, with what are here, number about 500 head—about two-thirds of which he will sell off this fall, and supply their places with those of the "lean kine" to fatten up for the next year's demand. Many of these beeves he sends off to the Eastern cities, some of which occasionally reach the Baltimore market. After looking at this herd we took a stroll through a peach orchard, where we had a splendid feast of this delicious fruit, rich and ripe right from the tree. When we had sufficiently

regaled ourselves our next move was for the colt grounds, about half a mile in another direction. We soon found ourselves surrounded by about forty colts of three years old and down to one—the sucking colts—how many, I cannot tell, were in another part of the farm. These colts are of various breeds, and destined for different ends—some to work—some to ride—some to sell, and some to keep as pets. I asked Mr. V. if he knew how many horses and mules he owned, and he replied "No, unless I count them."

We then visited the sheepfold, consisting of some sixty Southdown and other favorite kinds for table use, for which these are principally devoted. I have had the pleasure several times since I have been under this hospitable roof of testing the quality of those fine sheep. Our next visit was to a lot containing a variety of cattle of both sexes, equal to anything of the sort I have seen. In my first letter I spoke of the herd of milch cows. This department is composed of some sixty in all, including the calves, all of which are of the full Durham stock, and the milking time is quite an era in the management of this splendid estate.—I want to say a word about the mules and mule teams. I cannot tell how many there are, but I have seen a large number, all of which I consider *fine*. One pair of matched mules, used in the carriage, are beauties—not over size and very fast travellers. I rode on the box into Lexington the other morning purposely to watch their movements and to have a better view of the country. There was nothing of the horse kind in pairs that could pass them, and the coachman would not take the dust from any one in his advance. There was but one span he could not put in the back ground, and these were another pair to another carriage belonging to this same gentleman. I saw no matched mules in the ring at the Fair more symmetrically put up and better trained than those I speak of.

I have promised to give a description of the machine and the mode of gathering the seed of the blue grass. It is a frame or box, on runners, very much like the sleds the boys use in sliding down hills on the snow, with a sort of "cow catcher" in front in the form of the half of a fine tooth comb. To this a horse or mule is attached, and a boy takes his seat in the box, with a small hand hoe, and starts through the field, the comb gathering the stalks of grass between its teeth, which, when they are drawn up to the bar, the seed is torn off, and is deposited in the box. The little hoe in the hand of the boy is merely to keep the seed from clogging near the bar of the comb. The box will hold some ten or a dozen bushels, which is emptied as fast as filled. In one day twenty-five to fifty bushels of this valuable seed is gathered, without the trouble and labor of mowing and threshing. Why would not this plan do in gathering cloverseed.—I cannot see but it would answer this purpose as well as for the blue grass.

Before I close this letter I would like to speak of the "quarter" and its occupants, for the benefit of our anti-slavery friends. These negroes are of all sizes and ages, and the number is pretty large, and it is difficult to tell which is the greatest slave, the owner or the owned. As an illustration, I would remark that, as we were riding out this morning and after we had got some distance from the house a negro man came after us saying, "Master Isaac, Master Isaac," when Mr. V., turned and asked what he wanted, when the negro said, "May I go into town and get a pair of shoes?" "Why," said Mr. V., "did you not ask me for them when you were in town yesterday." The negro made some respectful reply, when "Master Isaac" told him he might go and get the shoes. This afternoon, while we were in the garden, a little darkey named Jim came in and asked permission to have the use of a particluar mare to ride on an errand. The reply was in the most complaisant tone, "No, as she wants shoeing, but you can take another," naming her. I mention these as only illustrating the manner in which these slaves are treated by this excellent and humane man. Indeed, I have not heard an angry word, or one spoken in a high tone, since my stay here.—Every thing moves on regularly, naturally, paternally and fraternally, under this roof.

UNION AGRICULTURAL SOCIETY OF VIRGINIA AND NORTH CAROLINA.

The annual meeting of this spirited society, was held during the same week of the Maryland State Show, and was as usual, very successful. *Jas. C. Bruce*, Esq., was nominated for President by G. W. Bolling, Esq., and re-elected by acclamation. The following gentlemen were elected officers of the society for the ensuing year, viz:—

For Vice Presidents—John W. Reese, Greenville, Va.; Nat. Raines, Sussex, Va.; John A. Peterson, Prince George; J. C. Baugh, Surry; Frank Ridley, Southampton; R. E. Haskins, Brunswick; Edwin W. Friend, Dinwiddie; John Rowlett, Petersburg; Gen. Wm. Ligon, Powhattan; H. K. Burgwyn, Northampton, N. C.; Thos. A. Hardy, Norfolk city; Thomas Miller, Granville, N. C.; Geo. A. Smith, Caswell, N. C.; John Baird, Person, N. C.; Hon. W. A. Graham, Orange, N. C.; Lewis Thompson, Bertie, N. C.; Roger B. Atkinson, Lunenburg, Va.; Charles Prince, Prince Edward, Va.; C. D. Alexander, Campbell; Robt. Cunningham, Pittsylvania; Sam'l Hairston, Henry; Isaac Dunn, Washington; C. C. Read, Farmville; J. W. Wilson, Cumberland; R. F. Taylor, Amelia; John H. Tyree, Lynchburg; W. H. Clarke, Halifax; A. S. Perry, Louisburg, N. C.; Hon. E. W. Hubard, Buckingham; G. C. Kent, Wythe; Dr. R. C. Pritchard, Warren, N. C.; M. P. Purnell, Halifax, N. C.; R. M. Stone, Guildford, N. C; Chas. L. Hinton, Wake, N. C.; E. M. Holt, Alamance, N. C.; R. R. Bridges, Edgecomb, N. C.; Richard Irby, Nottoway, Va.; W. Townes, Mecklenburg; John Johns, Appomattox; Paschal Buford, Bedford; W. C. Staples, Patrick; David McGavock, Pulaski; Edward Hubbard, Prince Edward; J. B. Jones, Chesterfield; Wm. B. Whitehead, Nansemond; G. W. Carroll, Isle of Wight; Arthur Smith, Norfolk county, Va.; Robt. Preston, Montgomery; A. M. Scaless, Rockingham; J. H. Haughton, Chatham, N. C.; Hon. A. H. Arrington, Nash, N. C.; Geo. P. Trayloe, Roanoke; Franklin Grayson, Smyth; Sam'l F. McGeehee, Charlotte; Chas. Beale, Bottetourt; Wm. Eggleston, Giles; Clifton G. Hill, Craig.

Executive Committee:—Charles Friend, Prince George; J. W. Eppes, Prince George; Wm. Irby, Lunenburg; J. B. Freeman, Sussex; John G. Turpin, Chesterfield; Daniel Lyon, Sen., Petersburg; J. C. Howlett, Chesterfield; R. D. Mellwaine, Petersburg; T. B. Hamlin, Dinwiddie; W. H. Rogerson, Dinwiddie.

T. S. Pleasants, *Corresponding Secretary.*
Jos. V. Scott, *Recording Secretary.*
John P. Branch, *Treasurer.*

The committee appointed to examine the Treasurer's account reported the same correct.

The regular business being finished, several gentlemen were called upon, who delivered interesting and instructive addresses on Agricultural subjects.

PREMIUMS.—The following among other premiums were awarded at the Show of this society.

Horses.—To D. Arey W. Paul, 1st premiums for fastest single horse and the fastest pair of trotting horses; to Jas. Clements, 1st premium for fastest pacing and saddle and harness horse combined—to D. Dyson, 1st premium for best saddle and harness horse combined—to Dr. J. B. Goodwyn, 1st premium for best saddle horse—to Ed. G. Booth, of Nottoway, for his morgan horse David Hill, 1st premium *for quick drafts*, and to H. J. Smith, of Richmond, 2d do for his Kossuth—for best brood mare, to Jno. O. Bragg, for Kitty Clyde, 1st premium and 2d do. to Albert Aikin, for his Milk Maid, 2nd do.—for saddle, 1st premium to B. W. L. Blanton, of Cumberland, for his Young Red Eye—and to J. O. Bragg, for his mare Kitty Clyde, for the saddle—for *match Horses*, 1st premium to C. F. Collier, for his horses Tom and Henry, 2nd do. to M. R. Bland, for Style and Fashion—for single harness mare or gelding, to M. P. Bell, 1st premium for his black gelding Frank, and 1st do. for bay mare Lucifer, to B. W. L. Blanton; for best 3 year old roan colt Blue Streak, 1st premium to H. O. Graves; and 2nd do. to H. I. Smith, for his bay colt Kossuth—to H. C. Miller, for his bay colt South Star, 1st premium, the committee deeming him worthy of especial commendation; 2nd do to Dr. J. B. Goodwyn, for his colt Ignomar; to Jno. Eubanks, for his one year old filly Sally, 1st premium, and to W. R. Bowden, 2nd do. for his chestnut colt—*thorough breds*, 1st premium to ch. h. Arlington, about 10 years old, by Boston, out of dam of Sarah Washington—to Thos. D. Watson, 1st premium to Fanny Fern, 7 years old, by Glencoe, dam by Medoc—to R. B. Beasley, 2nd do. for his br. m. Old Filly, 15 years old, by Priam, dam imported Invalid—to Thos. D. Watson, 1st premium for 3 year old b. c. Mohican; and R. Beasley, 1st do for 2 year S. C. Alfred—for *heavy draft*, for best stallion, to J. C. Griffin, 1st premium; to P. S. Coleman, 2nd best do.—to Geo. Reid, for best pair horses, 1st premium; to C. B. Turner, for best team of 4 horses, 1st premium. For *Mules and Jacks*, to B. C. Hand, for best Jack, 1st premium; to J. R. Spottswood, best pair mules $10; to the Model Farm for best team of Mules $20; to J. C. Baugh, for best Jennet, $15; and to 2nd do. to W. Griffin, $3—and a recommendation that a premium be awarded to Jas. H. Cox, for ch. m. Fanny Gray, as 3rd best brood mare.

Short Horn Cattle.—For best 3 year old bull, 1st premium to Dr. Saunders, of Wythe Co., Va., for his Highlander; 2nd best do. to John Burgess, of Dinwiddie, for his Jim, 4 years old—for best cow to Dr. Saunders, for Clarissa, 4 years old, 1st premium; and to Paschal Buford, of Bedford, 2nd do for Jane. Dr. Saunders also took all the premiums for younger short horns, except one, a bull calf of P. Buford's, and also for the best fat cow, $20; to Mr. Wiser, of Montgomery for best pair of fatted Cattle, $30; to Maj. Kent, of Montgomery, 2nd best $20. For *Devons*, to R. D. McIlwain, 1st premium, on 4 year old Devon bull Dinwiddie; to Wm. Turnbull, 1st premium, to Comet, 4 years old; to R. D. McIlwaine, 1st premium to cow Dairy, 4 years old; D. P. Branch, 1st do. to Sally, 2 years old; to Wm. Turnbull, 1st premium to Occa, 1½ year old; and 2nd do. to same, Marion, 1 year old, and for William, 4 months old bull calf; to Dr. R. W. Broadnax, 1st premium, to Buck, Devon bull, 2 years old. For *Alderneys*, to Jno. G. Turpin, for bull Balco, 3½, 1st premium; and to same for cow Duchess, 1st premium. For *Slaughtered Mutton*, J. G. Turpin, was awarded premiums for long and middle wools—and also for best native sheep—J. C. Baugh, of Surry, for the fattest long wool sheep; and to S. S. Bradford, of Culpepper, for fattest middle wool and also fine wool sheep—to latter also for his Sicilian grade Buck, and best Sicilian grade lambs—to same for his imported Silesian and also Merino sheep.

Montgomery & Bro., were awarded the premium for their Fan Mill.

A number of other premiums were awarded for Swine, Agricultural Implements, Household articles, Poultry, Vegetables, Flowers, &c. The ladies appear to have contributed very largely to the exhibition, and a very long list of awards were made to them.

HOW TO MAKE STRAWBERRY BEDS.

Two points must be understood, to grow the best strawberries :—1st, that the soil must be deep, and 2d, that it must be rich. If you look at the leaves of a strawberry, and because they are not very large, presume that the roots will extend but little depth, you are greatly mistaken. I have seen the roots of strawberries extend five feet down in a rich deep soil; and those plants bore a crop of fruit five times as large, and twice as handsome and good, as the common product of a soil only one foot deep.

And this reminds me of a capital instance of *strawberry delusion*, which most of our readers doubtless know something about, but which many even yet do not, perhaps, fully understand. I mean the history of the "Washington Alpine Strawberry," which Mr. Stoddart, of Western New York, advertised, and sold a great many dollars' worth of, some four or five years ago. Mr. Stoddart, I believe, was quite honest in the transaction; and yet the whole public were completely deluded by the "Washington Alpine," which was nothing but the old Alpine or Monthly Strawberry. The long and short of the matter was, that Mr. Stoddart had a corner of his garden which was *made ground*—a rich deep, moist soil, (I think it had been an old bog, or bit of alluvial, afterwards filled up) not less than eight or ten feet deep.—Mr. Stoddart had raised some seedling Alpine (which, so far as I know, always comes from the seed;) he had, by lucky chance, planted them in this corner of his garden, where the soil was so unusually rich and deep. There they grew so finely, and bore such enormous crops, that his neighbors could scarcely credit their senses. The story of the miraculous crop got into the papers. People came to see with their own eyes. In short, they bought and carried away the "Washington Alpines," at extravagant prices, with the full conviction that "seeing is believing," and that such strawberries were never before grown, gazed on, or tasted. Well, great was their surprise to find,

on planting and cultivating the "Washington Alpines," that there was nothing new or wonderful about them; and that, in fact, they all dwindled down to the old-fashioned Alpine Strawberry.—Mr. S., naturally enough, now has as many hard names bestowed on him for the fancied deception as he had before had hard dollars for really great crops. And yet, Mr. Stoddart sold his plants in good faith, and was probably as much deluded as the buyers. The whole secret of his unheard of crops, and the large size of his fruit, lay in the depth and richness of his soil; and as none of his customers had, like him, a rich ten feet mould to grow giants in, they had no "Washington Alpines."

The "moral" your readers are to draw out of this digression is, that they cannot well make their soil too deep for the strawberry. Perhaps they cannot afford to make it three feet deep, which is the right depth, for an extra fine crop; but, at all events, they can make it two deep.—And now, a word as to manuring it.

It is all very well to talk about composts and "well rotted manure." The real truth is, that in our careless country, not one gardener in a hundred has such things *ready for use* at the moment he wants to prepare his strawberry patch.—What people have at hand, from one end of the country to the other, is fresh stable or barn-yard manure; and the question is, how to use that to the best advantage.

The true way to do this, is to throw out the soil where your beds are to be made, two feet deep. Fill up the bottom eight inches, or a foot deep, with fresh stable manure, mixed with the litter, treading it down firmly. Then cover this with two-thirds of the soil thrown out, rejecting the worst part of it. This will raise the bed four inches above the surface; and as it will settle about four inches, it will be about level after it is settled.

This is all the preparation which I give my soil, and it is all that any soil of fair quality needs; only that I would much prefer to have it three feet deep, than two feet, and to have sixteen inches of stable manure and litter at the bottom than eight, though the latter brings heavy crops in a good soil.

You may put our your plants in August (September in Ohio,) or April. The only difference is, that if planted in August, you may lose half of them by the heat and drouth, unless it is a rainy season; while in April, you are certain not to lose a single plant, unless it is unsound when you transplant it.

To my mind there is no way of growing strawberries half so complete as in beds three and a half feet wide, with three rows in each—the plants in the rows kept clipped of their runners, and the ground between the rows nicely covered with straw all the year round. The largest and finest fruit is obtained in this way, and the beds themselves will last many years; while if they are allowed to cover the bed, you can, at the most, expect only two crops, and, generally, the fruit is of little, or no value, after the first crop.—*The late A. J. Downing, in the Horticulturist.*

Arrival of Lamas.—These animals, advertised on another page, have arrived at New York in the brig E. Drummond—71 were taken on board, but, owing to the heavy weather, 29 died before reaching New York.

CROPS IN THE UNITED STATES.

I notice by the reports in many of the leading newspapers, that the wheat crop of the United States is immensely large. I for one, believe these reports are greatly exaggerated, and that the wheat crop in the States and Canadas will fall short this year from last, almost, if not all that they both exported last year; and it is a well known fact, that both wheat and flour, corn and all, were as high, and in many places higher in the interior, last spring and summer, than in the cities on the sea coast, or even in the London and Liverpool markets. Had there not been some surplus in New Orleans, there would have been a famine in some of the Western and Southwestern States—all kinds of food for both man and beast were at famine prices. Only think of corn being a dollar a bushel and over, in Kentucky, Southern Ohio, Tennessee, and much more in Missouri.—Of course the last wheat crop had to be commenced upon as soon as ever it would do to make bread; and I am satisfied that the wheat growing counties of New York State have not grown enough wheat this season to feed the population in these counties. Many farmers will not thresh what they raised, as it won't pay for the threshing, and will feed it out to cattle and sheep. You may rely upon it, if there is much exported, we will be like farmers whom I have known, who sold lots of hay in the early part of the season, and by February, were buying all over the neighborhood at a much higher price. Canada and Ohio, will have nothing of consequence to spare; and I am confident the great West will not send forward her usual quantity, by many millions of bushels, for the reason that they have not got it.

There was the same reports of great crops in the papers in 1836. Business called me through a considerable portion of the wheat growing districts of the country, and in June of that year, I wrote to the editors of the N. Y. *Journal of Commerce* that it was all false about the large crops, and that I was convinced that we should have to apply to the well stored granaries of Europe before another harvest. My letter took them so much by surprise, after the many flattering reports they had previously had, that in their remarks they said had they not known me they would not have published it. It turned out as I said. Now I say if a quarter of the wheat is exported this year that we exported last, we shall have to replace it from some other country, or suffer before another harvest.

It is true that the distilleries' being stuck fast in the mire by the crisis, will save a great deal of the corn crop; but the almost total failure of our potatoes, both here and in some parts of Europe, will cause an increased consumption of food, and I would advise great caution in exporting wheat. Almost all other countries, if they fear a scarcity, prohibit exportation. Keep this note so that you can refer to it by and by.—*Cor. Country Gentleman.*

Chinese Sugar Cane.—We expect to receive from Mr. Asa Whitney, of the District of Columbia, a large supply of the seed of the Chinese Sugar Cane, in time for Spring sowing. It was from Mr. Whitney that we were principally supplied last season; the Patent office obtained their supply from the same source, and of its genuineness there need be no doubt.

AMERICAN FARMER.

Baltimore, January 1, 1858.

TERMS OF THE AMERICAN FARMER.

Per Annum, $1 in advance—6 copies for $5—13 copies for $10—30 copies for $20.

ADVERTISEMENTS.—For 1 square of 8 lines, for each insertion, $1—1 square per annum, $10—larger advertisements in proportion—for a page, $100 per annum; a single insertion, $15, and $12 50 for each subsequent insertion, not exceeding five. Address,

S. SANDS & WORTHINGTON,
Publishers of the "American Farmer,"
At the *State Agricultural Society's Rooms*, 128 Baltimore-st.
Over the "American Office," 5th door from North-st.

EXECUTIVE COMMITTEE OF MARYLAND STATE AGRICULTURAL SOCIETY.—An adjourned Meeting of the Executive Committee, will be held at the Society's Rooms, on the *2nd Tuesday in January*, at 12 o'clock, on business of the utmost importance. The members of the Society, and the Stockholders of the Show Grounds are respectfully invited to attend at the same time.

By order of JOHN MERRYMAN, Esq., President.
jan1-1t. SAMUEL SANDS, Gen'l. Sec'y.

A NEW YEAR'S INTIMATION.

In this number, as is our usual custom at the commencement of the year, we enlose a bill of the indebtedness of each subscriber to the AMERICAN FARMER. Although our terms are payable in advance, we have not been strict in enforcing the rule, being satisfied if the dues are settled within the first six months of the year. A number whose subscriptions commence with the volume, have neglected to remit, thus far, and some, we regret to say, are in arrears for several years—to all of whom, we most urgently appeal, to make an early payment. We do not like to appear in the character of a *dun*, but the monetary pressure which has been experienced throughout the whole world during the past year, and which still continues stringent upon all classes, has not left us unscathed—still we have cause to be grateful, as our own sufferings are so light, when compared with those of others of our fellow-men, and we have a strong faith that the darkest period of our national misfortunes has passed by, and a brighter day is approaching. With this feeling, we have a desire to bear and forbear, but at the same time we appeal to those who may find themselves indebted, and are able to forward the small pittance embraced in our bills, that they will much oblige us by attending to the matter at as early a day as possiable. Our dues are scattered far and wide, generally in very small driblets, but *our* indebtedness is in large sums, and must be promptly met, as our printers and paper makers and folders, and the innumerable etceteras which make up the demands upon publishers, are justly expected to be liquidated without delay, and at any cost.

MARYLAND STATE AGRICULTURAL SOCIETY.

We publish on another page, the statement of the Committee appointed by the Executive Committee, to examine into the financial affairs of the State Society. The report presents a very unfavorable aspect to the members of the Society, and the conclusions to which the Committee have arrived, commend themselves to their most serious consideration. The Committee recommend, in case no other provision can be made for the payment of our debt, that our interest in the Show Grounds, and any property owned by the Society, be disposed of to pay the same. We fully accord with the proposition, and would prefer seeing the dissolution of the Society, if that were a necessary consequence to the sale of the grounds, rather than those who have just claims against it, shall fail to receive their dues. We believe, however, that if a proper effort was made, the amount of our indebtedness could be realized from another source. At one of the first meetings of the Society in 1848, a Committee was appointed to memorialize the legislature for an annual appropriation, as was the custom in other States, in aid of the objects of the Society. About the same time a Committee, consisting of Joshua Vansant, Esq., and one of the editors of the "*Farmer*," was appointed on behalf of the Maryland (Mechanics) Institute, for a similar object, to that Institution—the latter Committee, immediately on the assembling of the Legislature, proceeded to Annapolis, and urged their claims upon the attention of the members, and were anxious to meet the Committee from the Agricultural Society, for the purpose of uniting in one bill, the appropriations asked for each, feeling confident, that, as the great body of the members of the Legislature represented the farming and planting interest, *their* claims would be more readily granted—the Committee from the Agricultural Society, however, delayed their appearance at Annapolis, until so late in the session, that their memorial could not reach a final action, and the application was never afterwards renewed—the Institute Committee, however, by dint of perseverance, succeeded in securing from the treasury of the State, the sum of $500 per annum, in perpetuity, payable in 60 days after the holding of its annual Fair, and which they have regularly received for ten years past. There is not the slightest reason why the *great* interest of the State, should not have received the same favor at the hands of the Legislature, which was thus extended to the mechanical, and we have never doubted, that a sum at least equal in amount to that appropriated to the sister association, would at the same time have been granted, had the Committee made earlier application at that Sessio n

Although the Society has seldom been able to pay its debts, by the regular resources of each exhibition, and its usefulness in consequence has always been more or less cramped, still the application has never been renewed—but we suggest to the Executive Committee, at its meeting on the second Tuesday of this month, the appointment of a strong Committee to renew it, and to ask of the Legislature the payment to the Society of at least the same amount which has been received by the Maryland Institute since 1848, which would go very far towards liquidating our debt. We have in recent numbers of the *Farmer*, shown that nearly every State in the Union has more or less aided in sustaining such Societies, and we are sure that no State is in a more healthy or prosperous state in its finances than our own, or more able, without prejudice to any class, to extend the desired aid, in this our time of need. We throw out the suggestion, for the consideration of those who should have the matter in hand.

MARYLAND AGRICULTURAL COLLEGE.

A meeting of the Commissioners and of the Stockholders of the Maryland Agricultural College, convened on Thursday, the 17th December, according to notice, for the purpose of going into the election of Trustees. Upon the examination of the accounts, it was found necessary to make a further postponement. We are glad to be able to say, however, that the collections had so nearly approximated the sum of Twenty Five Thousand Dollars, which the charter requires to authorise the election of Trustees, as to leave no doubt that an election will be had at the next meeting, which will take place on Tuesday, the 5th January. The Commissioners will meet on that day at 10 o'clock, A. M., and the stockholders at 1 o'clock P. M. An election at that time will still afford time to comply strictly with the original terms of the charter, and leave no necessity to ask the Legislature for a modification.

Congressional aid to Agriculture.—On the 14th ult. the following proceedings were had in the House of Representatives:—

"Mr. Morrill introduced a bill granting lands to the States and Territories for the promotion of agriculture and the mechanic arts. It appropriates 6,330,000 acres of land to be distributed according to federal representation."

We have not seen the bill offered by Mr. Morrill, but learn that it provides for a distribution of public lands to the several States for the purpose of establishing Agricultural Colleges, giving 20,000 acres for each Presidential elector to every State. A limited amount can be appropriated to the purchase of model farms, but not to the erection of buildings. Every State which accepts the trust must bind itself to protect it against contingencies. There are said to be some 400 Colleges of the character in Europe, sustained and conducted under the patronage of the government, and several are now projecting in the United States, beside that in our own State. Michigan has one already in operation, with 100 Students, and our Maryland College, will have offers for as many Students as can be accommodated, as soon as it is established.

P. S.—We have, since the above was written, received a copy of the bill. We appeal to the agriculturists of Maryland, favorable to the object, to forward, without delay, memorials in favor of its passage.

Committee on Agriculture, in the House of Representatives, viz:—

William G. Whiteley of Deleware, Lawrence W. Hall of Ohio, William H. Kelsey of New York, Guy M. Bryan of Texas, Justin S. Morrill of Vermont, John Huyler of New Jersey, Richard Mott of Ohio, James B. Foley of Indiana, and Jas. S. Gillis of Pennsylvania.

FARMERS' CLUBS.

We earnestly advise our friends, whenever they may conveniently do so, to organize neighborhood clubs, that they may meet frequently during the leisure season of winter and occasionally during the remainder of the year. The best form of such clubs, is in our opinion, that of the old Talbot County Club, and what, in some counties of Virginia, are called "Hole and Corner" clubs. They are limited usually, we think, to a certain number of members, perhaps twelve, who meet monthly at the house of some one of them, to spend the day, and eat a Farmer's dinner together. The conversation is confined to matters of practical agriculture, and the farm of the host of the occasion is subjected to scrutiny into every "hole and corner," and his management, without offence, freely remarked upon by his brother members.

The social quality of these meetings is a most agreeable feature; the discussions are free, practical and useful, and the habit of inspecting critically each farm at least once a year, is a powerful stimulus to the owner to keep things up in right order.

There is no possible objection to these associations either of expense, inconvenience or trouble. What farmer would not take pleasure at any rate in having his neighbors dine with him once a year, and what neighbor does not take pleasure in reciprocating such hospitality. It is one of the great wants of agricultural life, that farmers should be more together, think together, and act more in unison. Inquiry would be more awakened; they would become more alive to their peculiar wants and interests; and the practical knowledge of sensible men would be realized and diffused.

We hope the present season will be availed of, to organize such clubs in a great many neighborhoods.

THE MONEY MARKET—PRICES OF PRODUCE.

We continue to receive the most unfavorable advices from Europe, in regard to monetary affairs. The ramifications of the disasters in the commercial world, are far more extended, we have reason to believe, than have been experienced for nearly half a century. Not only in this country and Great Britain has the pressure been most disastrous to banks, bankers, and merchants and manufacturers, but the effects have been, if possible, still more severe in the German States, as also in France, Sweden and other countries. The result has been, that confidence has been destroyed, and instead of shipping cotton and other products, and drawing on houses in Europe for the product thereof, the export of specie to Europe, has been very largely resumed by those in this country having a necessity to place funds in that quarter, not knowing to whom it would be safe to ship, the oldest houses and the most substantial, some of them that had weathered every storm for an age or two in safety, having now been prostrated or crippled by the huricane that is sweeping over the world, and, it appears, with the same steadiness of progress which marked the approach of the cholera some years ago. The consequence of this state of things, is continued to be felt in every branch of business; the thousands of people who are unfortunately thrown out of work, or but partially employed, are necessarily restricted to the cheapest kinds of food and raiment, and to the smallest amount that will enable them to sustain nature—whilst those who are in better circumstances, are forced to restrict their outlays for luxuries, in consequence of the loss of dividends upon stocks in banks, railroads and manufactories, &c. The subject is one of deep interest to every class, and did space permit, we would like to present some statistics upon the subject, which would be of interest to the general reader; but our main object is, to show the causes which have operated to depress the prices of American produce, of almost every description—causes which no one could foresee, and which have astounded the most sagacious bankers and statesmen of our own country and of Europe. But a few months since, our government treasury was afflicted with a plethora, and the Secretary was purchasing government stocks having many years to reach maturity, at a premium of $18 on the $100, with an immense sum on hand for expenses. Now, Congress is no sooner in session, than he is calling for the issue of treasury notes, to the amount of twenty millions of dollars, bearing interest, with an urgency which shows that the national treasury is in danger of following in the wake of the banks, by going into a state of suspension. It is not, therefore, because there is an extra production of the necessaries of life, that tobacco, cotton, breadstuffs, &c., have so materially declined—for such is known not to be the case—but because of the dire necessity which is upon the world, of adopting the principle of taking half a loaf, rather than going supperless to bed. How long this state of things is to last probably no one can foretell; but let us have hopeful hearts, that we at least in this country have seen the darkest days of the calamity, and with the knowledge of the vigor and elasticity of character of our people, when the change does set in, we shall soon be again at sea, with confidence restored, business pursuits resumed, our working people with full employment, and the produce of our farmers and planters in demand at fair and remunerating prices. That this day is not far distant, we fully hope and believe; but whether or not, let us submit with patience and resignation to the will of "Him who doeth all things well," and who bringeth good out of what is an apparent evil to our finite vision.

FARM YARD SUGGESTIONS.

The care of Farm Stock in the winter season is one of those articles of Farm management, in which there is great deficiency among Southern Farmers and Planters. This is a time when every one may realize this, and therefore we may better expect to impress our readers with the importance of it. It is also a time when we may begin at once in the leisure of winter, to carry out for the future any good designs we may form, and which the busy seasons of cropping will otherwise be almost sure to thwart.

The single item of a convenient watering place for stock is of great importance, and greatly overlooked. To one who is accustomed to different management, the usual carlessness on this point is a matter of much surprise. The owner seems to act under the impression that stock requires very little water, at any rate in cold weather, and sheep and hogs when the branches are frozen, are not unfrequently compelled to satisfy themselves with snow melted in their own mouths. All other farm stock are limited in effect to one drink a day, and many, of the cattle especially, will frequently not get this if the roads be icy, and they are not compelled to go to the water. We know a gentleman, who having neglected a proper provision for his stock, made it a matter of conscience last winter to "afflict his soul" daily, by watching the manner in which the stock got their twelve o'clock drink. First his man Jack must go to the watering place, (a part of the nearest stream where the water was dammed up for the purpose) and with an axe cut away the ice of three or four inches thickness, a process which was repeated until the nightly freezing and daily cutting left a shelf of twelve inches, down which the fore feet must slide into a soft bottom of twelve inches more per-

haps, so that by the time an animal's head reached the water a most uncomfortable drinking position was assumed: to reach this place, they must descend an icy path at the risk of bruises and broken bones. To compel them to go to water under such difficulties an active boy is sent to drive them, who takes delight in the use of a long whip, and follows them most diligently to their destination. If they are not piled one on the other by the time they reach the water, the bull by right of might takes his stand in the deep hole and sucks the ice water in a most deliberate manner, stops occasionally as if considering whether that might not last him twenty four hours, and then again like a considerate toper takes another good pull. Finally satisfied, instead of passing over to the other side as a gentleman bull would, he turns about to the waiting herd, and with a shake of his head at the biggest ox, makes his way back amongst them, while they hook and push and scuffle over the ice to make room for his majesty. This was only the beginning of the process of supplying the cattle daily with muddy ice water in mid-winter. Our friend being considerably "exercised" by this inspection, very positively determined, to have before another winter, a pump or a cistern in or very near his barnyard. A conclusion which every consideration of comfort, economy and humanity commends.

As to the housing of stock, the usual recommendations originating in Northern agricultural journals, of stalls and close houses, the writer does not assent to for ordinary farm stock in this region. It may be best for an occasional pet animal, which is sure always to have extra care. Without such care as farm stock will be certain not to get, they will suffer from the confinement far beyond any benefit they may receive: indeed there is scarcely any care which will compensate for the vigorous healthy constitution which close stables are almost certain to impair. Health and vigor are prime requirements of a useful and profitable animal, and pure fresh air, and some degree of exposure to even the rigors of the climate promote these conditions. The degree of protection for cattle should not go beyond a good shed open to the Southwest, with room enough for all, without being tied up. These sheds should be kept well bedded with dry straw or other litter. The yard about them should lie so that it will not hold more water, than the litter will absorb—and the water from the roofs should be thrown off by spouting, or carried into a good cistern. Those wretched contrivances called barn yards, where the water is dammed up for the purpose of rotting immense quantities of corn stalks, and the cattle's legs knee deep are used as machines to help the process should be held in abhorrence. Without any protection whatever, except the lee-ward side of a stack of hay, with a free range and plenty of provender within reach, cattle will come through the winter in better condition, than in the best contrived farm-yard arrangements which may subject and confine them to this plunging and tramping through twelve or eighteen inches of wet muck. True economy of provender and manure however demand a degree of confinement and protection from the weather, and this degree will be found consistent with the health and thrift of the animal, in good shedding which breaks off the prevailing cold winds, dry bedding, and a dry but well littered yard, (with water at command) in which they may be constantly kept.

The common practice of hauling to one point where the wheat has been threshed, all of the corn-fodder of a large grain farm, makes much unnecessary labour of re-hauling to the field to be manured. It is much better to have an extra feeding yard where it may be consumed immediately on the ground where the manure may be wanted.—The cattle may be fed here during the day in all good weather and when the ground in the field is not in such condition, that it will be materially injured by their treading.

Oxen at work should be fed with better food than other stock, and always to themselves—young stock too should always be able to take their provender unmolested by those of greater size.

Horses are the better too for a free range in a standing pasture in all good weather; at night and in bad weather they should be well cared for in their stalls.

We make these as a few suggestions with reference only to points of some importance, which are very frequently overlooked, and which it is well to have attention called to at this particular season.

New York State Agricultural College.—A meeting of the Trustees was held in Albany, on 17th ult., at which the plan and specifications for the College buildings, prepared by S. E. Hewes, architect, of Albany, were chosen, and $250 awarded him for the same. Awards of $100 each, were also made to H. M. Wilcox, architect, Buffalo, and Rev. H. B. Taylor, of Fort Edward Institute, for plans and estimates submitted by them.

The President and Secretary were directed to prepare a memorial to be presented to Congress, asking for an appropriation to each State of the Union, of so much of the public land as will be sufficient to endow and put in operation, an Agricultural College in each State in the Union.

☞ Our friend Calvert's paper on Surface Manuring was received late in the month. In due time we will pay our respects to it.

THE MICHIGAN AGRICULTURAL COLLEGE.

We are very glad to hear through Hon. Joseph R. Williams, the President of the Institution, that the Michigan Agricultural College, the pioneer of this class of Institutions in the United States is fairly started, and has passed through one term of very successful experiment. The next term will open we understand with more than a hundred students. The Institution is popular with both people and students, and the most complete success is anticipated for it.

It is the design of the Trustees to make an application to Congress for a grant of lands which will give them a more liberal endowment. We wish them success in their application. Surely while the public domain is being bestowed so freely and liberally, an object so worthy can hardly be rejected.

The Michigan College is situated near Lansing, the State Capital. It is upon a Farm of seven hundred acres of land—a tract of great variety of soil, and fine natural capacities. Very ample buildings have been erected and Professors chosen, most of whom have already been actively engaged in their duties.

The plan of the Institution is fore-shadowed and partially defined in the law of its organization. It is designed to take boys from the common schools and instruct them in those sciences and train them in those practical arts, which combine to aid them in the cultivation of the soil. It is proposed to do for the farmer what West Point does for the soldier, or the Naval Academy at Annapolis does for the sailor. The full plan of instruction is not yet fully matured; experience will probably indicate modifications and changes from the system now initiated.

The law requires that students shall be employed in some occupation or labour upon the Farm, not less than three, nor more than four hours per day. And this amount of bodily labour it is believed, while it will invigorate and develope the body, will not at all interfere with, but rather promote mental cultivation. "Vigor of body," says the President, "gives vigor to the brain. In the Polytechnic Schools of Europe, and at the Military Academy at West Point, the student is often engaged in physical exercise many hours daily. But there, severe culture of mind and body are indissolubly connected, and the exercise becomes with many, the charm of their student life. Surely the labour which creates instead of destroys, and which causes the earth to bloom with luxuriance and beauty, and groan under its abundance, should be as captivating as that which is bestowed in reducing butchery to an exact science, and which recognises occasional desolation of the earth, and wholesale destruction of the race, as a necessary and normal condition."

It is designed to gather an Agricultural Library of the most comprehensive description, where the student may get a knowledge of the past history of agriculture, its progress, and its condition in modern States; and which will embrace a wide range of science, law, literature, history, philosophy, medicine, &c.

It is proposed to collect likewise, a Museum of models of Agricultural Implements, where the crude implements of past times, and other countries may be placed side by side, with the ingenious, light, and graceful implements of our own era and country, and where inventors will probably take pride in depositing models of their inventions.

A superior Chemical and Philosophical Laboratory has already been obtained as an indispensible aid even at the very commencement of the Institution.

Cabinets of Natural Science will be collected, and illustrative specimens of the mineral and vegetable kingdoms, especially of the State of Michigan.

Specimens of Animals, Birds, Fishes and Insects, and especially of all animals and insects that either destroy our crops, or infest our domestic animals, will be preserved, that the student may have the opportunity to study their nature and habits.

Horticulture of course, in the several departments of fruit, kitchen and flower garden, will be a most interesting feature of the Institution. Here the student may acquire, without being exposed to vexatious and expensive experiments, knowledge of the most delicious varieties of fruits, which the climate and soil will yield. He may study the destructive agents, such as the pear-blight, the curculio, the canker-worm, and the numerous parasitical insects, that infest our gardens and orchards; and may have before him constantly an impressive lesson of how tasteful and attractive a homestead may be rendered at a trifling cost.

The farm is a great and prominent feature.—Here will be tested various modes of cultivation, the effect of rotation of crops, the economy of labour-saving implements, the relative qualities of manures, the results of judicious draining, the relative productiveness of seeds, vegetables and fruits, and the characteristics, uses and value of various breeds of stock.

As to the student, the aim of the Institution is to make him a cultivated man, of sound mind and sound body, and so trained as to be capable of all the duties of a citizen.

As a Farmer, in concurrence with such studies as are essential to the general development of his faculties, and which are primary and essential, the Institution aims to make him a chemist, so far as a comprehension of the principles which affect his daily life and business is concerned. Not to make him necessarily a skilful analytic chemist,

except so far as his own taste and aptness may lead him, but to make him familiar with all those laws and principles, which affect and bear upon his business in so important a degree.

Physiology, the science of organised beings, both plants and animals, is an important branch of instruction. The laws of life, health, and growth, and the questions of adaptation of food, its amount, quality, preparation, &c., to the nature and structure of animals.

The Veterinary art will be taught by competent instructors, and it is designed that farmers of the surrounding country be invited to bring their diseased animals to the Institution, that they and the student may alike derive advantage by seeing them treated by skilled hands.

Entomology, the science of Insects, is a most important subject of attention. How little is known of the subject, and how desirable that every intelligent farmer should be taught to observe and study the habits of the myriads of insects which so frequently blight and blast the work of their hands, destroying fruits and crops in their march. Observation of these enemies, their nature, habits and operations from the larva or eggs, to full maturity, will engage attention

Such seem to be the leading ideas embraced in the system of the *Michigan Agricultural College* as we gather them from the able address of the President at its dedication. The subject is one of sufficient interest to engage the attention of every friend of Agricultural improvement, and is of especial interest just now in Maryland, where we trust to see soon an Institution with the same ends in view, however different in detail, in the "full tide of successful experiment."

Book of the great Railway Celebrations of 1857.—This is the title of a volume now in the press of the Messrs. Appleton & Co., New York, compiled by *Wm. Prescott Smith*, Esq., Assistant Master of Transportation of the Baltimore and Ohio Rail Road,—"embracing a full account of the opening of the Ohio and Mississippi, and the Marietta and Cincinnati Rail Road, and the North Western Va. Branch of the Baltimore and Ohio Rail Road, with histories and descriptions of same, and an account of the subsequent excursion to Baltimore, Washington and Norfolk, and the reception and entertainment there of the State Authorities of Ohio, and the municipal Representatives of St. Louis, Cincinnati, and Chilicothe—with numerous illustrations." Price $1.25, to subscribers. This will be an exceedingly interesting work, particularly to all who took part in the celebrations which it chronicles, and the well established character of the author or compiler, is a sure guarantee that the book will be well gotten up.

THE HOG CHOLERA.

A disease among swine has been raging for a year past, in many sections, and large numbers have been carried off by it; it is generally termed the "*hog cholera*," the violence and fatality of the disease being similar to the cholera, with which the human family were afflicted in years back. Many remedies have been proposed for the disease, but so far seem to have been ineffectual to stay its ravages.

In the last Louisville (Ky.) Journal, is published a very interesting article, from the pen of Dr. W. W. Ross, of that State, which we have read with much satisfaction, and regret we did not receive it in time for this number, but will give it entire in our next. In the meantime, we copy the following prescription by Dr. R., for the cure of cases not too far gone, which may be made available by some of our readers, before our next issue. The editor of the Journal says that "Dr. Ross has paid much attention to the disease, and living in a district of country where it has prevailed to a greater extent than any other, we know that his opportunities for observation have been unusually good—he has been quite successful in treating the disease with the acid solution of chlorate of potash, given below."

Extract.—"But the difficulty of prescribing remedial agencies to the inferior animals is enhanced when we reflect that medicines by no means always produce the same therapeutic or toxicological effects upon the inferior animal, that they are known to produce upon the human species. Arsenic is known to be fatal in large doses when administered to the human species, but may be given in almost any size dose to a dog with impunity; and again, jalap is fatal to a dog, or even ammonia; but either may be taken with impunity by the human subject in pretty large doses. So far as my experience of the use of remedies has extended in the treatment of hog cholera, I believe I have seen the most satisfactory results from the following prescription: R. pulv. chlorate potassæ zi (1 drachm); aq. font. (spring water) zi (1 drachm); hydrochloric acid (muriatic acid) zi (1 drachm); mix; to be kept in a dark place excluded from the light in a tight corked bottle. Two drachms or two teaspoonfuls of this mixture added to a pint of water constitutes the famous chlorine mixture which has been so highly extolled in the treatment of putrid diseases in Europe and in America, and may be administered at frequent intervals, in two or three ounce doses without danger. The only danger in giving it to the hog, is that of failing to give enough and sufficiently frequent.

"It is believed that this medicine will succeed better than any that has been tried in curable cases; but in such violent cases of inflammation (as has been described) of vital organs, it is absolutely certain that nothing would succeed. I think, however, I have seen this medicine successfully employed in prostrated cases. It may be administered in slops or milk, and a hog will not refuse to take it that way, when he will eat at all. But about a disease so difficult to cure, and affecting an animal so difficult to treat, I have perhaps said enough without discussing the properties of the medicine, or the *modus operandi* of its cure."

INJURY TO CORN.—We have heard a great many remarks in Maryland, of the injury to the corn, which has been gathered in a wet state—but we had no idea of the damage being very extensive. The following, however, from the Cincinnati Gazette of a late date, shows that it is not a local complaint :—

"We regret to learn that the corn crop has been very seriously damaged throughout the west, in consequence of early frosts and wet weather.—From a gentleman who has been through a large portion of the State of Indiana, we learn that farmers are very much alarmed. The corn that has been put in crib is heating, and purchasers refuse to buy it for any purpose, except where it can be used immediately in feeding hogs. In many places it is said to be difficult to find sound corn to answer for seed. We are aware of the general tendency to exaggerate reports of this character, but are satisfied that the corn crop has suffered very serious injury in Ohio, Indiana and Southern Illinois. To what extent the yield will be reduced, we are not prepared to say, but some parties estimate the loss at one-third of the aggregate crop. The latter was larger this season than in any former year, but the injury that has been suffered will probably reduce it to, if not below an average."

Upon this same subject, we copy the following from the Maysville (Ky.) Eagle, of the 15th ult:—

We have heard complaints, during the last ten days, from farmers throughout this county in reference to their corn crop. Several of them assure us that they were at a loss to know where to look for seed corn for the next season's planting, as they have no corn sufficiently sound to rely upon, and know of none such among their neighbors.—Of those with whom we have conversed, few had done any thing at all in order to stay the rot, and but one had been prudent enough to pull and husk his corn, and spread it out on his barn floor, in order to dry and preserve it as far as possible.

The following letter upon the subject is from one of the most intelligent farmers and close observers in all this region, and will be read with interest. We will take pleasure in publishing the views of our farmer subscribers, in hopes something may be elicited to arrest the wholesale destruction of the corn crop by the rot:

"The Farmers of this county have sustained serious damage by the rotting of their corn crop, both in the shock and standing on the stalk in the fields. Many crops are now one half lost, and the other half seriously damaged. The most mature specimens I can find are discolored in the pith of the cob, and their value of course much impaired. Many farmers attribute it to the wet weather.—This, no doubt, has aggravated the evil; but the true cause is to found in the fact that our first frosts found the corn full of sap. The consequence is, that it has never matured properly, continues *clammy*, and refuses to cure up as in favorable years. I furnish you these facts that you may notice them editorially, and invite the attention of your exchanges, that your readers may learn if it is *local* or *general*."

A. Haly, Bath, writing to the Ohio Farmer, says:

"Farmers have suffered much in consequence of the failure of their seed corn during the last two seasons—the result of the severe cold of the two past winters. Now we may depend on another failure the next season, if we do not select seed which has been thoroughly dried before the cold weather commenced. Much of the corn now standing out, or in the husk, is badly frozen, and the germinating power of such seed, if not entirely destroyed, is at least much impaired. Farmers whose corn is thus injured, should obtain good dry seed for next year's planting, as by this means they will prevent disappointment in raising the next crop."

U. S. AGRICULTURAL SOCIETY.—The following gentlemen have been appointed by *John Merryman, Esq.*, President, delegates to represent the Md. State Agricultural Society, at the annual meeting of the U. S. Agricultural Society, to be held at Washington City, on the 13th January, inst:—

Charles B. Calvert, James T. Earle, Ramsay McHenry, Gen. Tench Tilghman, Col. John H. Southoron, John C. Brune, Col. Oden Bowie, A. Bowie Davis, Dr. Samuel P. Smith, J. Howard McHenry, G. M. Eldridge, Col. Charles Carroll, Henry Carroll, Jr., Samuel Sands, Robert Gilmor, Edward Stabler, Anthony Kimmell.

CORN CULTURE ON LIGHT LAND.

A correspondent at Washington, N. C., asks for "the most approved method of cultivating corn on light land, so as to do away with the hoe altogether, or at least to lighten the burthen as much as possible,"—and adds: "Would the harrow or cultivator answer better than the plough?"

Answer.—If the *corn-harrow* or *cultivator* be used in the working of corn, and the workman carefully work up to the rows of corn, lengthwise and crosswise, the necessity for the use of the hoe will be greatly lightened, though we doubt if any system can be adopted, whereby its entire use can be dispensed with. To successfully grow a good crop of corn, the plants must be kept clean, from the time they are 3 inches high, until laid by.

RESUMPTION OF SPECIE PAYMENTS.—The New York and Boston banks have formally resumed specie payments, and suit has been followed by most of the banks in New York and New England. It is believed that this measure has been pressed upon the banks, from fear of certain penalties anticipated against them by the Legislatures of the several States, about assembling, and it is feared that the step has been premature, and will be prejudicial to business. We hope it may prove a wise movement, and if found so, the banks of Maryland and other Southern States will no doubt soon follow their example. Confidence alone, we believe, is wanting, to secure a general resumption by all sound banks—and the sooner all others go into liquidation, the better for the community.

☞ We have received a copy of the memorial of the Agricultural College of Michigan to Congress, praying for a donation of land to that institution.

PROCEEDINGS OF THE EXECUTIVE COMMITTEE OF MD. STATE AGRICULTURAL SOCIETY.

Baltimore, December 1, 1857.

The Committee met pursuant to adjournment. Present—*Ramsay McHenry, Esq.*, President, and Messrs. Smith, J. H. McHenry and Frank Cooke.

The Committee appointed at the last meeting to examine the accounts of the Treasurer, made a report, which was read, and referred to the Executive Committee elected at the late annual meeting of the Society. The Committee then adjourned *sine die*.

Test, SAMUEL SANDS, *Sec'y*.

After the adjournment, *John Merryman, Esq.*, President of the Society, called a meeting of the new Board. Present—besides the President, Messrs. S. P. Smith, J. Howard McHenry, and Frank Cooke.

The question of fixing the salaries of the General Secretary, Treasurer and Marshal, was taken up, agreeably to the requirements of the constitution, considered, and on motion, postponed to an adjourned meeting, to be held at the Society's rooms, on the second Tuesday of January, at which time the members of the Society, and the stockholders of the Show Grounds, were requested to attend, to take into consideration the subject matter contained in the following Report, from the late Board, viz:

The Committee charged with the examination of the Treasurer's books, and the recommendation to the Society of the plan to be pursued in meeting its obligations, beg leave respectfully to report, that the receipts of the Treasurer up to this date, have been—

From Subscriptions, Guarantees and Donations,	$4,319	50
From Admittance to Show Grounds,	3,267	25
" " to Amphitheatre,	382	18
" Sale of Membership Tickets,	1,428	00
" Rent from Refreshment Saloon and privileges,	1,000	00
" Sale of Manure and Reaper,	215	00
" Fees for entrance from Live Stock,	1,295	90
" Miscellaneous sources,	86	27
	11,994	10
Add note for manure sold,	65	00
	$12,059	10

And that his disbursements, as shown by vouchers, have been—

For expenses of Chestertown Trial of Reapers and Mowers,	$135	50
For Police Department at Exhibition,	1,694	63
" Salaries of Officers and Employees,	738	00
" Cost of refitting and adorning Show Grounds,	2,908	73
" Printing and Publishing,	231	51
" Entertainment of Guests, Musicians, Officers and Police,	585	00
" Music,	260	00
" Rent of Rooms,	200	00
" Premiums,	4,529	87
" Miscellaneous items,	11	84
	$11,295	08
Add Treasurer's Commission on Collections,	1,199	41
	$12,494	49
Showing a deficiency in Treasury, of	$500	00

There yet remains uncollected, of donations and guarantees subscribed for, besides an unknown amount, (probably about $750) not to be ascertained, on account of loss of a Subscription Book, the sum of $3,699 00

The liabilities of the Society yet undischarged, amount (so nearly as can be ascertained) to $9,225 19

Leaving unprovided for, ... $5,526 19

To which should be added—

For repudiation and default of Subscribers, at least, ... 699 00

And for Treasurer's Commission on amount to be collected, ... 300 00

Making total amount to be raised to free Society from debt, ... $6,525 19

Your Committee recommend the sale of all the property of the Society, (including the unexpired term of their tenantcy in Show Grounds,) unless the friends of the Society will step forward promptly, and make up the sum requisite to its relief.

RAMSAY McHENRY,
FRANK COOKE,
JOHN MERRYMAN.

The Committee then adjourned to the second Tuesday of January, at 12 o'clock, noon, at the Society's rooms.

Test, SAMUEL SANDS, *Sec'y*.

INDIANA—CROPS, &c.—Jonathan Edgecomb writes, Lima, Ind., September 19, 1857:

"Hon. B. P. JOHNSON:

"Wheat, in this region of Indiana, is nothing more than a fair average crop. There were large quantities of land sown last fall with winter wheat, that was plowed up this spring, and sown with spring wheat, oats, some barley, buckwheat, and some planted with corn. I had 18 or 20 acres of spring wheat—8 or 10 of it will yield about 20 bushels to the acre, the residue about 12 bushels.

"I was in St. Joseph, Calhoun and Eaton counties, in Michigan, two weeks since, and made much inquiry among the farmers as to their crop of wheat, (very many have thrashed and sold) and the prevailing opinion was, that there was about an average crop in the State; some were of opinion that it was short of a medium crop, in proportion to population, as there are many new settlers gone into the northern part of the State, particularly on the contemplated railroad route from Grand Rapids to Grand Traverse Bay; very many are in the pine timber trade.

"I am of opinion that many of our public writers are over estimating our wheat crop, the surplus particularly."—*Jour. N. Y. State Agr. Soc.*

TOBACCO IN VIRGINIA.—The stock of old tobacco in Virginia is smaller now than usual, not more than half what it was last year. The entire stock at the various inspections does not probably exceed 1,200 hhds. In this city it amounts to about 1,000, only 200 of which are for sale. A large quantity of new is arriving in loose lots.—This year there are many new producers, but early frost and other causes have curtailed the yield.—Some estimate it 60,000 hhds., others 62,000 and 65,000.—*Richmond Dispatch.*

FLORICULTURE---January, 1858.

Prepared for the American Farmer, by W. D. Brackenridge, Florist and Pomologist, Govanstown, Balt. Co., Md.

Green and Hot-house Departments.—At this season of the year, many plants being in a dormant state, should therefore be kept in a low temperature, and very sparingly watered, during such season of rest, thereby preserving the roots sound and fresh, against the time when such plants may be started into growth again, by the application of greater heat and moisture. And we wish it to be understood, that plants from all quarters of the globe, have their natural seasons of rest, brought about either by a fall in the temperature, or the want of a constant or regular supply of moisture, as within the tropics, where the seasons of rain are, as a general thing, periodical; and we name a few genera, most of the species of which form an example of such plants as we refer to above, viz: *Allamanda, Abstræmeria, Barnadesia, Bouvardia, Cestrum, Clerodendron, Erythrina, Euphorbia, Fuchsia, Hoya, Lophospermum, Pelargonium, Solandra, Tecoma,* &c. &c. The skilful cultivator will perceive, without much reflection, that the system we recommend, will repay him with a profusion of bloom the coming season, provided, always, that good treatment is given after they are again started into growth; and next month, we shall state in what such treatment consists. Pay particular attention to the temperature of your greenhouse—for which consult last month's instructions—and we would add, that in both the green and hothouse, the temperature should be allowed to range at least 10 degrees higher in the day time, than that at which it is kept during the night; this is imitating nature, of which the gardener is a mere assistant, and ought therefore to consult her, and by so doing, might learn much that he could usefully apply to his practical operations. Keep all your plant structures clean of insects, by occasional fumigations of tobacco smoke, and the use of the syringe. Pick all decayed leaves from the plants, and weeds from the pots; the latter, when they become green or dirty outside, ought to be cleaned with a brush and water, and to economise time, this work can be performed in wet days.

Roses—if treated as directed for November, will now be coming into fine bloom; water at least twice a week with weak liquid manure, and fumigate with tobacco smoke, to kill the green fly. Prune back those Rose plants lifted in October or November, and tie the remaining wood up to stakes.

Camellias.—See last month, for general treatment. Such as are done flowering, if wanting it, ought now to be shifted into larger pots. About the latter end of the month, grafting and in-arching may be commenced, and if new seedlings are wanted, such flowers as show a stigma, may be impregnated with pollen taken from some other good kind.

Azaleas—wanted to bloom early, will require to be placed in a warm situation; water more freely at the root, and syringe occasionally overhead.

Ericas—will now be growing, and some of them in bloom; pinch back the tips of the leading shoots, in order to make them bushy, and wherever the wood is found to be in a proper condition, (and that is, between a soft and hard state,) continue to put in cuttings of both these and Epacris, the treatment of both being nearly the same.

Pansies.—Sow some seed now, and the plants will be fit to plant out in April. Those sown in October and pricked out last month, may now be placed in 4 inch pots—observe to keep them near the glass.

Chinese Primroses.—Such as have not been shifted into the pots in which they are to bloom, ought to have this operation performed without delay.

Pelargoniums—if they require it, may now be repotted, and cuttings from the tips of tall shoots, if taken off and rooted in a gentle bottom heat, will come into bloom late in spring, and the old plants will be improved by being pinched back, and the side shoots tied down to the rim of the pot, as they grow, so as to form handsome heads.

Achemenes.—A few roots of the various kinds should now be potted, and placed in a warm part of the house; or better, if on a bark bed, where they will receive a gentle bottom heat, which will cause them to push strong.

Hyacinths, Tulips, Pæonias, Deutzias, and Lilacs, for forcing into early bloom, to decorate the greenhouse in spring, should now be removed into the plant stove, and in order to start them into bud soon, use the syringe freely every morning, and moisten the floors of the house in the evening.

LAND SALES.—We are gratified to find, that instead of going West, in search of farming lands, the farmers of the States north of us, are turning their attention to the easily improved lands of our own State and Virginia. There is no region of country in the United States more desirable, enjoying all the comforts and luxuries of life, ease of access to market, good society, &c. than the Eastern Shore and South-western counties of Maryland, and the Eastern section of Virginia; and the surplus population of the Middle and Eastern States, would in a little while, with industry, on our easily improved soil, increase the value of the real estate, to a far greater extent, in a given time, than could be possibly done with the lands of the West, without being obliged to dispense with nearly all the blessings of civilization, as is the case for years, in many cases, in settling in the new States.

The Kent Co. (Md.) News records the following sales:

George Vickers, Esq., trustee for sale of Angevine Warren's real estate, sold a farm of 282 acres, subject to dower, for $5,300. Mrs. Warren purchaser.

George Vickers, agent for Mr. Abraham Hurlock, sold at public sale, Thursday, his farm, lying on Langford's Bay, containing 401 acres, for $38 62½ per acre, or $15,588.62. E. Gould, of Delaware, purchaser.

George T. Hollyday sold his farm, near Bacchus' Mill, containing 412 acres, at private sale, for $12,000. Mr. Crawford, of Cecil, purchaser.

The Easton Gazette says:

Mr. Thomas P. Williams has sold his farm, situate in Miles River Neck, containing 340 acres, to Robert Oliver, Esq., of Baltimore, for $80 per acre.

Mr. Wm. P. Leaverton has also sold his farm, lying near Wootenaux Bridge, in Chapel district, containing 297¾ acres, to Thos. Baker, Esq., of Bucks county, Pa, for $9,000.

SURFACE MANURING.

RIVERSDALE, Dec. 22, 1857.

To the Editors of the American Farmer:

GENTLEMEN:—There appeared in this month's No. of your valuable Journal, an article from the pen of the Senior Editor, on the above subject, which I do not feel disposed to let pass unnoticed, as it differs so widely from my views and limited experience. I am forced to conclude that my worthy friend (the Senior Editor) must have been dreaming of the good old times we used to have at this season of the year, when he penned that article; but he ought not, because the age has degenerated, to attempt to frighten Young America, in this age of progress, by calling up the spirits of those who would be considered now old fogies, to sustain his views.

He commences his article with the bold assertion, "that the ammoniacal gases constitute the most important element of manure, and is in fact the true measure of the value of manures, and is so considered by nearly all good chemists, as well as intelligent practical farmers." I deny this proposition in toto, and I call upon him to produce the names of the distinguished chemists of the present day, and the intelligent practical farmers, who hold these opinions; for so far as I can judge, *both* of those classes utterly repudiate such a doctrine. Professor Way, the analytical chemist of the Royal Agricultural Society of England, tells us there is more ammonia in an acre of clay soil a foot deep, than there is in twenty tons of Peruvian Guano. Professor Voelcker, of the Royal Agricultural College at Cirencester, in England, after the most thorough analytical investigations, ridicules the idea that either stable manure or guano are deteriorated by the escape of the ammoniacal gases, and asserts that there is but a *very* small amount of free ammonia in either of those manures, and contradicts the generally received opinion, that the pungent odor found in stables and in guano, arises from the escape of ammonia. He advises that manure should be hauled immediately from the stable and spread on the surface, as the most effectual means of preventing loss in fertilizing matters.—Professor Johnson also declares that manure loses none of its enriching qualities, by being hauled out in the fall and spread on the surface. Mr. Clemson, in a number of able articles in your journal, holds the same doctrine, and even Professor Liebig asserts, that not only is ammonia supplied by the rains and dews to the soil, but that the soil itself absorbs it from the atmosphere; and is it not reasonable to suppose, if it absorbs it from the atmosphere, that it certainly would from the manure spread on its surface. I might go on enumerating authorities upon authorities, among distinguished chemists opposed to this doctrine, until I should have a much larger *pile* than the one my friend speaks of; but I consider the above distinguished names sufficient to establish the chemical point, and I think I should have nearly all the intelligent practical farmers, who have experimented for themselves, on the other point.—Not satisfied with committing himself in favor of the whole ammonia doctrine, my friend copies the following, from Morton's Cyclopædia of Agriculture, and states that it embodies his views precisely: "The wasteful practice of spreading manure on the surface of the soil, and allowing it to be bleaching for weeks and even months before being ploughed in, is still carried on in some counties of England, and stoutly defended by hosts of clay land farmers. *If the perpetrators of such an enormity be right*, Science is at fault, analysis is an illusion, and ammonia and all its kindred a family of impostors."—Now, who is right?—this Mr. Morton, who makes such a bold assertion, or the distinguished gentlemen whom I have named. And is it astonishing, that agricultural science should be decried by the community at large as a humbug, when we see such opposite opinions advanced by those professing scientific knowledge? If Professor Voelcker is correct, in stating that the best Peruvian Guano does not contain more than ¾ per cent. of free ammonia, and that 40 tons of fresh horse manure contains not more than three (3) pounds of ammonia, what becomes of this favorite ammonia theory, which is daily sounded in our ears, and the denunciations of Mr. Morton against all who have the audacity not to believe it. Again, as fermentation is necessary to set free the gases, how is it possible for that fermentation to take place, in manure spread on the surface?—And hence the sound reasoning of Professor Voelcker, in recommending its immediate application to the soil, in place of leaving it in large bodies to ferment.—The greatest injury is inflicted on the agricultural interest, as well as on true science, by such publications as this of Mr. Morton; as they undertake, in the most positive language, to instruct us in a science which they are entirely ignorant of themselves, and this is the principal cause why the science of agriculture finds so few advocates among the practical farmers of the country. The science of agriculture is to this day a hidden treasure, and although there is a faint glimmering of light in the horizon, still that great day has not yet broken upon us, when we can sit down in our study, and ascertain, by positive and unerring rules, the proper mode of producing the greatest results in agriculture; and it will take years yet of patient investigation, to even approximate such a system. Until we have Agricultural Colleges and experimental farms, for thoroughly and practically testing the various theories of really scientific men, where the learned and practical can work together in the same field of investigation, it will be impossible to separate the grain from the chaff, and say what should be followed and what discarded; but a new day is dawning upon us, and if the agricultural class will only be true to its interest, we shall soon have in Maryland an institution which will do more for this great interest, than all the books which have been written on the subject; for the *mind* of the student must be assisted by the *hands* of the workman, to discover the hidden truths of this science.

CHARLES B. CALVERT.

NEW GUANO ISLANDS.—A discovery has recently been made by Captain Ord, a British officer, of a group of Guano Islands on the coast of Arabia, and a lease or grant of them has been obtained from the Imaum of Muscat—several vessels have been sent to the Island, for the guano, which is said to be most valuable, and the successful working of them (for which purpose 150 men have been sent, under Captain Ord's direction) will, it is thought, withdraw British trade from the Chinchas, and the combination may thus force the Peruvian Monopolists "to lower the enormous charges that it has hitherto arbitrarily imposed upon this agricultural necessity."

RENDERING LARD FOR FAMILY USE.

James McHenry & Co. of Liverpool, Eng., dealers in American Provisions, have published a pamphlet giving directions for the preparation of meats, lard, etc., from which we have arranged the following suggestions, which will be beneficial to farmers' wives at this season.

The melting of lard preserves it, without using salt or any other antiseptic, simply because the pure lard is contained in very minute meshes or cells, something like honey in a honeycomb, and the cells (cellular membrane) being the parts that purify, any process which will destroy or burst them whilst they are yet sweet, so that the lard may be collected separately, is all that is necessary for its curing or preservation.

The application of heat has been found the simplest and most effective mode of bursting these cells. Melting in a cast-iron pan is the usual way; but in consequence of the liability to scorch or singe, melting by steam has been lately introduced, but steamed lard is not so certain to keep sweet, owing, no doubt, to the cells being imperfectly burst; the heat of the steam not being intense enough for the purpose.

Fire melting can be managed with entire safety under a proper system.

The first and most important step, is to have the lard pan well set, so that it will become evenly heated all over; for if the fire strikes with much force against one side of the pan, the lard will be scorched there, while the other part has not commenced boiling. It is desirable that the size of the pan should be fitted to the work to be done, as a small quantity in the bottom of a large pan will never turn out fine lard. It is necessary that the regulation of the heat should be completely under the control of the operator, and it will not do to depend on a damper in the chimney; indeed, the first effect of a damper is to increase the heat, by preventing that already generated from escaping up the chimney. There are three ways of checking a burst of heat more or less quickly; the most gradual is, to open the furnace door, the next is to throw some ashes or slack on the fire, but the most prompt is to throw a pailful of cold lard into the pan.

Commence by scouring the pan with sand, and washing it clean with soft soap; cut the lard in small pieces, and use a slow fire; do not hurry in the lard, so that it will lay dry in the bottom, but try to have sufficient liquid lard to keep it swimming; continue to fill steadily, never allowing the boiling to exceed a simmer. The boiling and stirring must be continued until every piece of fat has swelled and melted, so that they all float to the top of the pan; any pieces laying in the bottom are readily felt by the lard stirrer. When all are swimming, withdraw the fire, and leave the job for the night. During the night the melting goes on, and the pieces that were floating on the top are all fallen to the bottom in the morning, leaving the pure lard quite clear.

The lard is now strained through a sieve, being careful not to disturb the sediment in the pan; no matter how close the sieve may be, considerable sediment will be deposited by precipitation.

The rough lard which remained in the pan has to be converted into fine lard, if possible;—it consists of about two-thirds lard and one-third skins and jelly, which must be boiled very slowly in a smaller pan. As it is at this point that most mistakes are made, it will be well to describe the process more minutely.

There is but little danger of scorching at the commencement of the boiling, as the upheaving of the mass acts the part of stirring; but when the fire is applied to warming up half melted lard, great care is necessary; the stirring must be constant until the boiling commences, and again when the boiling ceases, it must be incessantly stirred till the fire is very low.

There are two ways of heating the residium lard,—one is to boil slowly for an hour, a little cold lard is then thrown in to settle, and as much liquid lard as possible is taken off. The remnants in the pan are now partly jelly, which must be destroyed by the action of fire, requiring long and severe boiling and stirring, until the skins are reduced to a sandy matter, the fire destroying all that is glutinous; the whole is then to be put into a press, when the lard is at once separated.

But as it is so likely that this burning away of the jelly must injure the color of the lard, unfitting it for eating purposes, an improvement has lately been adopted, which is, to boil very slowly till the pieces are reduced as much as possible, without burning the jelly; the whole are then put into a powerful press, which expels both lard and jelly; by throwing these into cold water, the jelly is precipitated, and the lard floats and congeals.

MIASMA.—The hints contained in the following paragraph, may be found useful to some of our readers in sections of country subject to malaria:—

Dr. McCosh, a surgeon of much repute in India, has published some interesting statements in regard to the characteristics of malaria. The state of sleeping or waking, he says, materially affects the disposition to miasmata. A person may be exposed, when awake, to miasma, and not suffer, but is much more predisposed to an attack if he is exposed to it asleep. Hence the danger of sleeping in a marsh; nevertheless, it is found that a man may sleep in a marsh with less harm, if he take the precaution of tying a gauze veil over his face. Miasma is capable of being dissipated by heat. A moist atmosphere is more favorable for its action than a dry one, and therefore a person may sleep in a marsh with comparative impunity, if he sleep beside a watch-fire. Miasma loses its property of producing fever in its progress on the wind.

CHINESE SUGAR CANE.—The editor of the St. Louis Daily Intelligencer was shown specimens of sugar manufactured at Belcher's sugar refinery in that city, from Chinese sugar cane grown this year in the neighborhood. The sugar is brown, and pretty well granulated, being very similar in taste to the Louisiana sugar. The editor of the Austin (Texas) Gazette has seen a sample of sugar made from the Chinese cane by Mr. Studor, near Austin, which he describes as being of fine strain and color, and such as would command the highest price in New Orleans.

GOOD SPIRIT—A subscriber in Appomattox, Va. in renewing his subscription for the year, says: "I send you $1, not *grudgingly*, but *freely;* and would not be deprived of its monthly visit for double that amount."

THE FREE ACCESS OF AIR TO THE SOIL.

BY CUTHBERT W. JOHNSON, ESQ., F. R. S.

At a season when so many of my readers are employed in draining operations, it will be useful to refresh our memories with the suggestions of the chemist; and it may not be without its use, if at the same time we recur to some of the great objects in this way, to which the men of the past generation of farmers had their attention directed. Many of the efforts, indeed, of the great agriculturists who flourished at the close of the last century, (attempts in which they failed, chiefly for want of science to aid them,) might be renewed now with a much better chance of success than in their days. I have on a recent occasion glanced at the unsuccessful endeavors of Arthur Young to apply mineral acids as a manure, and we have seen how very near he was to the discovery of super-phosphate of lime, and I will now show how he labored to apply various gases, or airs, as he called them, to the roots of plants. Young evidently had the sagacity to perceive that if the atmospheric air could be applied into and under the soil in which the growing plant was placed, very beneficial results would arise; he had noted the effect of the atmosphere in places where plants were placed over dry drains, and in other situations the most exposed to the breezes, and he began therefore a series of experiments in June, 1782, upon the fertilizing effects of various gases applied to the roots of plants. Arthur Young, in reporting the results, frequently speaks of "phlogiston," which it may be well to remind the reader, was an imaginary substance, conjured up by the chemical philosophers of that day, which they deemed to be the essence of the food of plants, and who thus regarded it useful to explain unknown things, by giving names to imaginary substances. The detail of Young is entitled, "Some attempts to apply air as a manure to the soil."—(*Annals of Agriculture*, vol. 1. p. 169.) In this, after telling us truly enough, "It has never been my conduct to abandon to speculation, that which can be brought to the test of experiment;" he describes his experiments with some barley planted in pots, and subjected to the action of carbonic gas, hydrogen gas and common air; and he adds: (*ib.*, p. 185) "Had not inflammable air been tried, the leading feature for selection would have been the effort of the volatile alkali, (ammonia,) which is universally excellent; and as putrefaction is known in common practice to yield admirable manure, it might have been concluded with great propriety, *that the volatile alkali is the food of plants, a theory for several years the favorite deduction of my practice.*" And in another place he remarks—seventy years before covered homesteads were advocated: (*ib.*, p. 187) "I have a standing sheep-fold, part covered and closed, and part of it uncovered; the whole is littered equally, but one load of the dung in the covered part is worth two in that of the uncovered. When the carts go in to be loaded, it stinks much more offensively, and makes the men's eyes water that move it. This shows that the volatile alkali and phlogiston are retained, and that the action of the sun and atmosphere is to carry them off." It is curious to read these sagacious remarks, and to think of Laws and Liebig, three quarters of a century afterwards discussing the claims of ammonia to the position to which it was elevated by poor Authur Young. "No day passes," he sorrowfully concludes, "without my regretting my insufficient ability to pursue the hints which arise. Time is precious; life flies fast away, and leaves one little more than wishes to execute what fortune forbids."

These attempts to apply air to the soil long ceased after the days of Young. Then arose the drill-husbandry, and the beneficial horse-hoeing stirrings of Holkham. The air, it was soon found, did good. It was then remembered that the atmosphere was charged with insensible moisture; it was long afterwards shown, that this vapory portion was not pure water—that it held ammonia and nitric acid in solution; and attempts have been made to promote the free access of these watery vapors to the soil, by means, not only of deep stirrings of the soil, but by causing a flow of air through the common land drains. It would be useful if such trials were extended; and it would assuredly be attended with an increase of our knowledge, if some small trials were instituted, upon the effect of passing a steadily-continued current of air through the soil in which plants are growing. This would be valuable, not perhaps as being in this way generally applicable to our fields, but as showing by the results whether more extended, and more practical applications might not be desirable. If the reader will refer to the ninth volume of the Journal of the Royal Agricultural Society, he will find (p. 340) some striking examples of the good effect produced by facilitating the entrance of air into the land by means of air drains constructed by Mr. S. Hutchinson, of Grantham, in Lincolnshire. Amongst other trials, he describes one in a field consisting of ten acres of strong loamy soil upon a clay sub-soil. "It was under-drained in 1843, by twenty-five parallel drains, two feet deep and five yards apart, each discharging into a covered out-fall at the bottom of the field. In the autumn of 1846, it occurred to me that this being a shallow drained field, presented a good opportunity for experiment. I divided it into five compartments, each containing five of the drains. With the two outside and centre compartments I did not interfere. In the other compartments I introduced what I call an air-drain across the *upper-end* of the five drains in each case to join them together. I then connected the air drain so cut, with the adjacent open ditch at the top of the field, in order to increase the natural current or circulation of air through the ordinary drains. In the following table the produce of an acre of both the air-drained and the non-air-drained land is given:—

	TURNIPS.				
	Skirvings. Tons.	Cwt.	Pine Tons.	Apple. Cwt.	Wheat. Bush.
Air-drained,	16	4	10	8	28½
Non-air-drained,	13	12	6	16	21
In another experiment:—					
Air-drained,	-	-	-	-	35
Non-air-drained,	-	-	-	-	30

In the windy or breezy weather Mr. Hutchinson adds that a draught of air through drains is always perceptible at the outlets; and at other times, after water has ceased to be discharged, a hazy evaporation is frequently visible. Many incidental circumstances, therefore, tend to confirm the opinion, that if by any artificial means we could make the atmospheric air gently filter through the soil, its beneficial influence in promoting the growth of plants would be very considerable.

The good effect indeed of land-drainage, which we are too apt to explain entirely by the removal of the stagnant water, should, to an equal extent, be assigned to the warming and fertilizing effect of the air, which diffuses itself through those cavities and pores of the soil previously filled by the water. The results, like those to which I have alluded, have been very well shown in the observations made by Mr. Henry Stephens, and recorded in his work on the Yester Deep Land Culture. To give an instance—Six thermometers were placed in the soil at the depth of eighteen inches. This distance from the surface was chosen, since at that depth they were found not to be sensibly affected by the changes of the temperature of the atmosphere. Observations were made, to ascertain the temperature of the ground before and after it was thoroughly sub-soil ploughed. In the following table column I. gives the month; II., the mean temperature, in 1849, of the soil of a field at Yester Mains in its undrained state; III., that of another field in the same year, after being thorough drained; IV., that of No. II. in 1850, after thorough draining: V., that of the soil of the south border of a garden at Yester in 1849:—

VEGETATING SEASON.

I.	II.	III.	IV.	V.
March, - - - - -	36	37	37	42
April, - - - -	40	38	39	43
May, - - - - -	48	47	42	51
June, - - - -	54	53	54	58
July, - - - - -	55	54	59	62
August, - - - -	56	46	54	62
September, - - - -	50	54	55	59
October, - - - -	35	37	50	50
Mean of Vegetating Season,	46.75	45.75	48.75	53.37

NON-VEGETATING SEASON.

I.	II.	III.	IV.	V.
November, - - - -	34	37	44	46
December, - - - -	34	36	39	41
January, - - - -	32	32	32	43
February, - - - -	34	38	36	53
Mean of Non-Veg. Season,	33.75	35.75	37.75	45.75
Mean of both Seasons,	42.33	42.42	45.08	50.83

The celerity with which thorough draining may affect the temperature of the surface was observed in one instance at Broadwoodside. A thermometer placed one foot under the surface, on the crown of an eighteen-feet ridge, before a drain was cut, indicated a temperature of 48 degrees; after a drain had been cut to the ordinary depth on each side, in the open furrow of the ridge, the temperature rose to 49.5 degrees, that is, 1½ degrees in six hours.—(*Agricultural Gazette*, 1855, p. 651.)

It would, indeed, be an incorrect conclusion that the cause of the increase of temperature is assigned to the mere removal of the land water, since in well-drained land the temperature at 18 inches keeps pace with that of the atmosphere. In my own observations, the thermometer is placed in the thoroughly drained land, in fact a porous rock-sand, and here the thermometer placed at 18 inches from the surface commonly rises and falls with another thermometer placed immediately above it, about five feet from the surface.

The advantages then of a more extended supply of air to the soil do not appear to have any attendant drawbacks. The attraction of the soil for the insensible moisture of the air, and for its ammonia, is so considerable, that no fear need be entertained of its want of power to separate these from the atmospheric gas. The same power which enables the soil to abstract the volatile alkali from rain-water, is exerted in absorbing it from the air with which it comes in contact.

"Every acre of ground," observes Prof. Way, "which allows water to percolate freely, benefits equally by the nitric acid and ammonia of rain. But whence comes the additional luxuriance which vegetation put on when the land is abundantly worked? Whence the Lois Weedon crops? Obviously Mr. Smith cannot be satisfied with the ammonia of rain, he must have some from the air also; and he gets it from the air in a far greater quantity than the rain could furnish." "In fact," (adds Mr. Hoskyns,) "he habitually expresses his obligations to *the dew*, as a more steady benefactor than the rain, in much the same terms as might express the relation of daily bread to an occasional feast."

Any improvement in the draining nourishment to our lands in this way, has a great and paramount advantage; that it is deriving our supplies from an ever present fountain; no river waters are taken—no vested rights are trenched upon.

Such a retrospective glance at the labors of past agriculturists, and of the illustrations which science has since afforded, will hardly fail of being useful to us in the drainage improvements in which, at this period of the year, most cultivators are engaged. The advances in science, too, which we have been tracing since the time of Arthur Young, and the noble little band of farmers who graced the close of the last century, should cheer us on in the path of improvement. They labored from enlightened convictions which they were content to explain by mystic phrases. We, it is true, sometimes rather too closely imitate this amusing example; but then we have the aid of advanced knowledge—the progress of agricultural chemistry, a science whose first gems were hardly formed when Priestly was experimentalising in his laboratory, and Arthur Young amid the barley soils of his own good honest Suffolk.—*Farmers' Magazine.*

FATTENING PROPERTIES OF PEAS AND BEANS.—These articles have been found by chemical analyses rich in nitrogen. The inference has been that they would be specially useful in supporting the waste of the muscles of animals, and it has been suggested that they would be particularly useful in the production of wool. They are evidently valuable for these purposes, but not the less valuable for the production of fat. Those persons who have used peas for fattening hogs, consider them worth as much as Indian corn. In districts where that grain is not grown, very fine pork is produced from peas. Dickson, in his work "On the Breeding of Live Stock," states that a sweepstakes was entered into between five East Lothian farmers, to be claimed by the one who should be pronounced the best feeder of cattle. Forty cattle of the same breed, and in equal condition, were divided equally among them, as fairly as possible. They were put up together the second week in September, and killed at Christmas following. The winner of the stakes fed his animals wholly on boiled beans with hay.—*Ex.*

BREEDING HORSES.

We have received from E. Nash, of Auburn, N. Y., a few of the proof sheets of *The Farmer's Practical Horse Farrier*, from which we judge the book will be a very useful one to farmers. We give below an extract from chapter second, which will show the style in which it is written, and give some idea of the work. We shall refer to it again as soon as we see a complete copy :

"The maxim, however, that "like begets like," is only true in part, as there is a constant tendency to change arising from difference in food. Change of climate, or other physical conditions to which they might be exposed, might naturally be expected to produce considerable corresponding modifications in the form, size, color, and coating of animals; as it is well known that cattle generally become very large and fat when reared for many generations on moist rich soils, where good pasturage abounds, but are distinguished by the shortness of their legs; while on drier situations, where the herbage is sparse, their whole bulk is less, and their limbs more muscular and strong. A country of heaths or of other innutritious plants, will not produce a horse so large nor so strong as one of plentiful herbage, as is manifested between those reared on bleak mountains and fertile plains, high latitudes and more temperate climes, sandy deserts and watered vales. A change of situation in the one case, after a succession of generations, not only diminishes the size of the animal, but affects the character and form of his body, head, and limbs. Thus, if a London dray horse be conveyed to Arabia, and subjected to the same influences to which the native breed of that country is exposed, in the course of some generations he will present the leading characteristics of the Arabian horse. On the contrary, if the race thus changed be conveyed again to England, in the course of several generations, it will gradually acquire the properties it formerly possessed. This fact would seem to prove that the Arabian horse cannot exist in any perfection in any of the northern or western countries of Europe, and that the humidity of the climate and the influence indirectly arising from that cause, are the principal reasons of this change. Similar instances might be given in reference to the changes which have been observed in the sheep, the goat and the hog.—The former, when subjected to the climate of the West Indies, from Thibet, Spain, or Vermont, where their fleeces are fine, delicate, and soft, after a few years are entirely covered with rough, coarse hair, resembling that of the goat.

"Breeding should be conducted with some definite object in view. There is no greater error than the common remark of some farmers, of some wretched under-sized, ewe-necked, cat-hammer wreck of a mare, broken-winded, ring-boned and spavined, "Oh, she will do to raise a colt out of!" She will do! but what will the colt be? It will not be worth the mare's grass, let alone the price of the stallion's service. But it is a good feature that there is a growing anxiety among farmers to raise valuable stock. This is attributable to the fact, that it is not only as cheap to keep a good horse as a bad one, but in reality it is much cheaper. The prime cost is the only difference to be considered; the cost of stable room, keep and care is identical, while the wear and tear is infinitely less, in the sound, useful animal, than in the broken jade. The work which can be done, and the value earned by the one, is in no possible relation to that of the other. The horse bought at the age of four years at $300, when he has attained the age of eight is worth twice the money, either for work or for sale, to the horse that was bought for a third of that price, when he has attained the same age.

"What is called *breed* in horses, consists in the superior organization of the nervous and thoracic organs, as compared with the abdominal; the chest is deeper and more capacious; and the brain and nerves are more highly developed. More air is respired, more blood purified, more nervous energy expended. Whilst the heavy cart-horse may be considered to possess the lymphatic temperament, the blood horse may be regarded as the emblem of the nervous and sanguine temperament combined; the latter, however, predominating When the nervous temperament has the ascendance, the animal will carry but little flesh, but will go till he drops, never seeming to tire. He will, however, take too much out of himself, become thinner, and what is called a hot horse. When the sanguine temperament greatly prevails, the horse will have great muscular powers, but not much inclination to put them to the stretch. When the lymphatic temperament has superior influence, the animal, though looking fresh and fat, and starting well at first, will soon flag and knock up, and will rather endure the lash than make an extra exertion. It is the happy combination of these three temperaments that make a perfect horse, when severe exertion is demanded. The full developement of the abdominal organs is essential, inasmuch as it is through the food that both the muscular system and the nervous energy is furnished. If the digestion is weak, the other powers will be inefficiently supplied. The sanguineous organs are needed to furnish the muscular powers, and the nervous system is demanded to furnish the muscles with the requisite energy, and capability of endurance. What is called *bottom* in the horse, is neither more nor less than the abundant supply of nervous energy, the muscles being at the same time well developed.

"There are two errors commonly committed by persons selecting animals from which to breed. Some pay too much attention to pedigree, and too little to form, spirit, etc. The correct theory is, though form and character is of primary importance, the blood should never be neglected. The great point to be aimed at in a horse for all work, is the combination in the same animal, of maximum of speed, compatible with sufficient size, bone, strength and solid power, to carry heavy weights, draw large loads, and to secure to the stock the probability of not inheriting deformity or disease from either parent. Breed as much as possible with pure blood, of the right kind, and breed what is technically called up, not down, that is to say, by breeding the mare to a male of superior, not inferior blood to herself; except where it is desired to breed like to like, as Morgan to Morgan, for the purpose of perpetuating a pure stream of any particular variety which is needful. A half-breed mare should never be put to a half-breed stallion, as in that case the product in nine cases out of ten degenerates below the dam, whereas if she be bred to a thorough-bred stallion, the product will be superior. And the error is, to breed from mares that have become noted for their speed. Some persons will pick up some long-legged, rangy, broken down, trotting mare, which could perhaps trot a mile in 2.30, thinking to produce something very fine. Nothing

can be more ill-judged, as in the majority of instances it is shown in the end in disappointment. A mare, with all the best blood in her veins, if she has not good shape and good points, is not fit for a stud."

HANDLING TOBACCO.

Increased attention is being paid in Connecticut to the raising of tobacco. In the "Homestead," of that State, a series of papers is being published on the subject, and after giving instructions as to the seed-bed, the ground, the growing plant, and the harvesting the crop, the writer proceeds to advise as to its after management, viz:—"The time is now at hand for taking down the tobacco from the sheds, stripping and preparing it for market. The great fault of tobacco growers is that they strip too soon, before the thorough drying of the whole plant. It becomes however often a matter of importance to clear the tobacco out of some particular building which has been pressed into service to accommodate the present large crop. If it is necessary to move it, it must be done on a warm, damp, not a wet day. After this time, (in fact long before this) the bulk of the plants has very much diminished, and if not fit to strip, the desired space may be gained by crowding the rails closer, and putting the plants thicker on the rails.

Stripping.—Wait till after the first of January, and then take the first thawing, damp day, not in *wet* weather; and never strip till the main leaf stem is properly dry, and remove from the poles only as much as can be immediately stripped.

"Assort when stripping into three sorts. 1st, put all the sound, whole, fine, good color by itself, thus making one sort of *perfect wrappers*. If well done, this sort will bring *more than the whole crop* if stripped together. 2d, take all the very light *yellow*, that also with large holes, and the thick leaves for the second sort, thus making imperfect wrappers, which will bring about half price; and 3d, place all the balance for fillers.

Each hank should contain about what can be *easily* clasped by the thumb and finger of a *small* hand, the buts all placed *even* and then wound as near the end as possible with the binder.

When hanked, each hank should be piled compactly in double rows, buts out, tips lapping, not spread like a fan *open*, but more like one *shut*, and see that *every* leaf is straight. One man should be on the pile to pack. When completed, cover well all but the buts, and as soon as the buts get dry, say in one or two weeks, the leaf is ready to pack in boxes, the sooner the better. Early packed—if in good order—cures best."

We acknowledge the receipt, through Mr. Jas. S. Waters, from Messrs. L. Tucker & Son, of copies of their "Annual Register" for 1858 and "Rural Affairs," a handsome and tasteful volume made up of the material contained in the previous issues of the "Annual Register." These works are edited by an experienced and able writer, Mr. J. J. Thomas. They are admirable little works, embracing every subject of Farming, Horticulture, Fruit Growing, Farm Buildings, &c., largely illustrated. Price for the bound vol. $1; for the Register 25 cts.

TURKEY FATTENING.

At this season of the year the subject of fattening turkeys is of the greatest importance. Many of the birds brought to market are very poor, and a little attention to this matter for a few weeks will increase the profits of the farmer and the pleasure of the consumer.

It is only when the cold comes, and turkeys are about six months old, that they should be fed with better and more plentiful food, in order to increase their size and plumpness for market. Indian corn, ground barley, wheat, also rice and other articles used to fatten common fowls, are considered best for turkeys. Their weight, when well fattened and carried to market, should average twelve pounds; their living and dead weight is eighteen to twelve pounds.

Cobbett says, "As to farming turkeys, the best way is never to let them get poor. Barley meal mixed with skimmed milk, and given to them freely, will make them fat in a short time. Boiled potatoes mixed with Indian meal will furnish a change of sweet food which they relish much, and of which they should be allowed to eat as much as they can. As with others, the food of this bird must be kept clean, and the utmost care taken not to give them on the morrow the mixture of the preceding day, because if the weather is warm, it will sour, which might displease them."

Much has been published of late in our agricultural journals in relation to the alimentary properties of charcoal. It has been repeatedly asserted that domestic fowls may be fattened on it without any other food, and that too, in a shorter time than on the most nutritive grains. "I have recently made an experiment," says a writer for a Philadelphia paper, "and must say that the result surprised me, as I had always been rather skeptical.—Four turkeys were confined in a pen and fed on meal, boiled potatoes and oats. Four others, of the same brood, were also at the same time confined in another pen and fed on the same articles, but with one pint of very finely pulverized charcoal mixed with their food—mixed meal and boiled potatoes.—They also had a plentiful supply of broken charcoal in their pen. The eight were killed on the same day, and there was a difference of one and a half pounds each in favor of the fowls which had been supplied with the charcoal, they being much the fattest, and the meat greatly superior in point of tenderness and flavor."—*Rural New Yorker.*

THE VALUE OF INDIAN CORN.

For the followiug interesting information in regard to this little understood kind of food, we are indebted to Hunt's Merchant's Magazine:

"By those who do not know, or are too scientific to profit by the experience of nations of men and herds of fat cattle, Indian corn, rice, buckwheat, &c., are only considered 'good fodder.' Liebig states that if we were to go naked as the Indians, or if we were subject to the same degree of cold as the Samoiedes, we should be able to consume the half of a calf and a dozen candles at a single meal. During excessive fatigue in low temperature, wheat flour fails to sustain the system. This is owing to a deficiency in the elements necessary to supply animal heat, and the strong desire for oleaginous substances, under these circumstances, has led to the belief that animal food is necessary for human support. But late scientific experiments, and a

better acquaintance with the habits of the North American Indians, have shown that a vegetable oil answers the same purpose as animal food; that one pound of parched Indian corn, or an equal quantity of corn meal, made into bread, is more than equivalent to two pounds of fat meat.

"Meal from Indian corn contains more than four times as much oleaginous matter as wheat flour; more starch, and consequently capable of producing more sugar, and though less gluten, in other important compounds it contains nearly as much nitrogenous material. The combination of alimentary compounds in Indian corn, renders it alone the mixed diet capable of sustaining man under the most extraordinary circumstances. In it, there is a natural coalescence of elementary principles which constitute the basis of organic life, that exists in no other vegetable production. In ultimate composition, in nutritious properties, in digestibility, and in its adaptation to the varied necessities of animal life in the different climates of the earth, corn meal is capable of supplying more of the absolute wants of the adult human system than any other single substance in nature."

CULTURE OF WHEAT.

A wheat soil must be compact. If it is not so naturally, mechanical means should be employed to compress it. Treading light wheat land in the fall or early in the spring with sheep, is frequently beneficial, and a good heavy roller is decidedly advantageous. Crosskill's Clod Crusher, compressing land, as it does, similarly to the treading of sheep, is found very useful on sandy wheat fields in England. We are earnest advocates of deep plowing and thorough pulverization of the soil, but these must not be carried to excess in wheat culture. It is easy to make the light land too fine and loose for wheat. When wheat is sown on a clover sod after one plowing, it is not advisable to plow it too deep; if the sod is all covered and a good "seed bed" obtained, that is enough. Subsoil and plow deep for corn and root crops, and, if you summer fallow, for wheat also; but if wheat is sown at one furrow on a clover sod turned under immediately before seeding, we should seldom go more than six inches deep.

The best large field of wheat we ever saw in England, was on a calcareous loam that had been two years in red clover, grazed with sheep, which, a considerable portion of the time, were allowed a pound of oil-cake per day. It was plowed about three inches deep, just before sowing, and a bushel and a half of shed drilled in per acre, one foot apart in the drills. The yield was 55 bushels per acre.—*Genesee Farmer.*

THE CATTLE DISEASE.—A correspondent of the Massachusetts Plowman, gives the following remedy for Pleuro-Pneumonia, now said to be prevalent in that State :—

PLEURO-PNEUMONIA.

Epsom salts - - -	1 pound.
Sulphur - - - -	3 ounces.
Ginger - - - -	1-2 ounce.
Spirits of Turpentine -	3 table-spoonfuls.

If it does not act freely in six hours, repeat the dose, and when it has acted freely, give—

Powdered nitre - - -	3 drachms.
Emetic tartar - - -	1 drachm.
Digitalis - - - -	1-2 drach.
Nitrous ether - - -	3 table-spoonfuls.

And give two quarts of gruel three times a day.

NEW ADVERTISEMENTS.

H. R. Roby, Fredericksburg, Va., offers Apple and other Fruit and ornamental trees, Evergreens, Shrubs, Plants, Roses, &c. at his Hopewell Nursery.

Dr. Reese's report of inspections of guano since his last report.

Page & Co., it will be seen, has another important verdict given in their favor for violations of their patent for Saw Mills—those mills have stood the test of time, and hundreds of them have been used for years in all the States with entire satisfaction.

H. G. Harvey, of Kilmarnock, has the black pea, which he will supply to those wanting.

Peyton Johnston, of Richmond, offers several breeds of Hogs for sale, among them some of the Hampshire, from his imported stock—these hogs are highly spoken of, and Mr. J. will furnish them undoubtedly fine.

Imported Holstein Cows, also Ayrshire stock, and Swine of various breeds, for sale on enquiring at this office.

C. Warns, Elk Ridge, offers Chester Pigs, and sundry varieties of Fowls.

Addison, Wallace & Co., Alexandria, Va., offer Agricultural Implements and Field Seeds, also the various guanos and other manures, to farmers visiting their city.

Dr. H. James, of Jersey city, proposes for a small consideration to send a recipe to those afflicted with consumption. The advertisement has been a good deal ridiculed, and we do not wish to be considered as endorsing it—we know nothing of the merits of the case.

Paschall Morris & Co., Philadelphia, offer a number of valuable Agricultural Implements and Machinery.

C. B. Rogers, Philadelphia, also offer valuable Agricultural Machinery, Implements, and Field and Garden Seeds, including select varieties of pure.

Luther D. Jones, Beltsville, Md., offers a tract of land, on the railroad, between Baltimore and Washington city, and its proximity to the capital of the Union, would make it a desirable investment to an enterprising man.

R. Sinclair, Jr. & Co. offer their Maynard's Improved Champion Corn and Cob Crusher, and other Mills—the value of which is borne testimony to, by Mr. Hughlett, of Talbot Co., one of the best farmers of Maryland; also, Reading's Patent Corn Sheller, with a fanning attachment, which will shell and clear 2,500 bushels per day; likewise other Shellers, &c., and their Patent Screw Propeller Straw Cutter.

E. Whitman & Co. offer fresh imported Garden Seeds, just received from Europe; also Agricultu- Implements and Machinery of every description, including their Young America Corn and Cob Mill, &c.

Jno. S. Reese & Co., Baltimore, offer Manipulated, or Phospho-Peruvian Guano, which has gained much favor with farmers and planters, and is believed to be more valuable and much cheaper than the Peruvian used alone.

Wm. H. Royer & Bro., Philadelphia, offers Coleman's Plantation or Farm Mill, as worthy the attention of farmers and planters.

Bibb & Co., Balt., offer the celebrated Little Giant Corn and Cob Mill, at greatly reduced rates.

John L. Mifflin, Philadelphia, offers the Blood Manure, which we hope Maryland and Virginia farmers will try this year.

Memorial of Members of the Board of Education

Of the State of Michigan and of the Faculty of the Agricultural College of that State, praying a donation of land for the Agricultural College.

To the Senate and
House of Representatives of the United States:

The memorialists, members of the board of education of the State of Michigan and of the Faculty of the Agricultural College of the State of Michigan, respectfully represent that, in obedience to a requisition of her constitution, the State of Michigan has established an agricultural college for instruction in agriculture and the natural sciences connected therewith; that the State has appropriated *ninety-six thousand dollars* to organize it and promote its objects, most of which has been expended; that a farm of nearly seven hundred acres has been purchased and occupied, suitable buildings erected, a corps of professors appointed, who are engaged in their respective duties; and that the college has been in successful operation for more than six months, and that about *one hundred* students are now receiving instruction at the institution.

They further represent that the course of study is inseparably combined with a system of labor in the institution; that it is its design and policy to afford ample and thorough education of the student physically, morally, and intellectually; to ennoble the calling of agriculture, and teach men to increase the productions of the earth.

They further represent that to supply a deficiency in present systems of education, for which this institution is designed, and to develop its objects, will require the establishment of numerous and adequate professorships, and a larger, earlier, and more permanent endowment to insure success than the legislature of any State will be likely to provide.

They further represent that in a country so thoroughly agricultural as the United States, and contemplating the nature of the great trust of the public lands with an enlightened and comprehensive forecast, no more legitimate and no wiser disposition can be made of limited portions of them than for instruction of men in multiplying the productions of the earth, and thus conducing to their comfort and higher civilization.

Your memorialists therefore pray that five hundred thousand acres of the public lands of the United States be appropriated and conveyed by the general government to the constituted authorities of the State of Michigan for the use of, and to establish on a permanent basis, the Agricultural College of the State of Michigan.

Signed by JOHN R. KELLOGG, *President*, and the Officers and Professors of the College.

BALTIMORE MARKET—Dec. 28.

[The Steamer Persia from Liverpool, at N. York, brings dates to 13th Dec. Financial affairs in England, were brighter, but some heavy failures continued to be announced. The failures in Hamburg and other cities on the Continent were enormous, and the financial storm was progressing steadily and was unprecedentedly violent. Cotton was a little lower, in consequence of the stagnation of trade in the manufacturing districts of England, and the high rate of discount for money. Flour had slightly advanced, but business generally was dull, and a general waiting for the storm to spend its fury. Business is pretty much at a stand throughout this country and Europe, but an early resumption of trade after this month, is looked for. The Chincha Islands are again in the hands of Vivanco. It is said that a change has been, or is shortly expected to be made in the Peruvian Guano Agency, in this country.]

Cattle—Receipts are light, and prices range from $4 to $5 on the hoof, equal to $6 a 8.50 nett, and averaging $5.75 gross; only a small lot were sold at the highest figures—Hogs, are in fair supply, sales at $6, but prime lots bring $6.25 per 100 lbs. gross—Sheep, 3.50a4.25 per 100 lbs. gross. In Flour, the advices from Europe, though unfavorable, had no effect on our market; Ohio super, $4.75, Howard-street, $4.75, City Mills, super, $4.50, cash; Western extra 5.25 a 5.50; extra Howard-st. 5.50 a 6.0, and City Mills, for shipping, 5.50 a 5.75; Baltimore ground Family Flour, by the quantity, 7.75, and do. extra, $6.75.—Corn Meal, city $3.37, and Brandywine Mills, $3.50—Rye Flour, dull, $3.75 per bbl. for 1st quality. Wheat, receipts light, and but little prime in market; good to prime reds, 1.02a$1.08 1.05a1.10 for fair lots of white, 1.12 a 1.18 for good shipping parcels of white wheat, and for choice lots of white 120a125 Corn in good demand, at 45 a 48c. for good to prime new white; 48 a 52c. for do. yellow, and 39 a 42c. for mixed lots of do.—Oats, buoyant, at 30 a 33c. for Va. and Md., and 34 35c. for good to prime Pa.—Rye, Pa. 76c. and Md. 65 a 68c. —Molasses, holders firm, but market quiet.—Sugar, P. Rico $7.50 a 7.62 for fair, and $8 a 8.62, for good to prime do. Cuba and English Island, $8 a 8.50, for good to prime, and $7.25 a 7.50, for fair. Cloverseed, $5.62 a 6.00; Timothy $2.25 a2.75, and Flaxseed 1.10 a 1.12. Whiskey, city, 21½ a 22c. and Ohio, 22 a 22½. Cotton, demand limited and price tending downward, Uplands, 11½ a 12¼, 4 months.—Black eyed Peas, 2.75 a $3 per 2 bushel bag, and White Beans 1.25 a 1.75 per bushel. Guano, Peruvian A $60 per ton of 2000 lbs.; Colombian, $40 per ton of 2240 lbs.; African, $35 of 2000 lbs., and Mexican AA $30 to 35 per ton of 2240 lbs. as in quality and quantity—inferior qualities, lower; but little Phosphatic Guanoes in market, and the change in the ownership of the Chincha Islands may again interfere with the supplies in the spring, of Peruvian. Tobacco, receipts light, and sales of crop small, attention being directed principally to ground leaf, which we quote at 7.80 a 8.50 as in quality, for Md.; infer. short seconds $5 a 6.50; brown leaf, 3 a 9, and extra 10 a 14—Wool is drooping, 17 a 19c for unwashed, 27 a 28 for pulled, 28 a 30 for tub washed; for fine qualities no demand.—Hay 15 a 18 per ton for baled, 12 a 14 for loose—Straw, wheat and oat, 9 a 12 per ton, and rye straw 15 a 16—Naval Stores, Spirits turpentine, 42c. per gal.; Rosin, No. 1, $2.50 a 3.50; No. 2, $1.90 a 2; Tar and Pitch, $1.75 a 2.

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